



**MAT 2009**

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# Language Comprehension

## Instructions

Fill in the blanks.

### Question 1

Professionals focus their ..... on fulfilling their responsibilities and achieving results, not on ..... a particular image.

- A leadership – attributing
- B planning – devising
- C abilities – contributing
- D energies – portraying

Answer: D

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### Question 2

When you are living with your ..... values and principles you can be straightforward, honest and .....

- A inherited – distinct
- B core – up-front
- C innate – durable
- D cultural – perceptive

Answer: B

### Question 3

In the role of a counsellor, you are an authority figure whose objective is to ..... attentively and sensitively to employees who ..... you with their feelings.

- A manage – direct
- B project – focus
- C listen – trust
- D concentrate – believe

Answer: C

### Question 4

If a junior executive neglects his professional development and ..... education, he can easily and quickly become obsolete in a world changing at ..... rates.

- A higher – vulnerable
- B management – supreme
- C better – supreme
- D continuing – dizzying

Answer: D

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### Instructions

Each of these questions has an italicized part. Choose the option that best replaces the under lined part. Answer option (a) repeats the original.

### Question 5

The political masters of the health care system have not listened to professional health planners because it *has not been profitable for them to do that thing*

- A has not been profitable for them to do so
- B has not been profitable for them to do that thing
- C has been unprofitable for them to do that thing
- D has been unprofitable for them to do so

Answer: A

### Question 6

Most bacterial population grown in controlled conditions will quickly expand to limit the food supply, *produce toxic waste products that inhabit further growth, and reached and equilibrium state within a relatively short time*

- A will have produced toxic waste products that in habit further growth and also will reach and equilibrium state within a relatively short time
- B produce toxic waste products that inhabit further growth, and reached and equilibrium state within a relatively short time
- C will then produce a toxic waste product that inhabit further growth andthus reached an equilibrium state in a very short time
- D produce toxic waste products that inhibit further growth and reach equilibrium

Answer: D

### Question 7

It could be argued that the most significant virtue of a popular democracy is not the right to participate in the selection of leaders, *but rather that is affirms* our importance in the scheme of things

- A but rather is affirmation of
- B but rather that it affirms
- C but rather it's affirmation
- D but instead of that, its affirming that

Answer: B

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### Question 8

Long popular among the connoisseurs of Indian music, Ravi Shankar first impressed western listeners with his phenomenal technical virtuosity, *but they soon came appreciate his music as an artful* expression of an older culture's musical insight.

- A but it soon occurred that they appreciated his music as an artful
- B but they soon came to appreciate his music as an artful
- C but soon this was surpassed by an appreciation of it as an artful
- D which was soon surpassed by an even deeper appreciation of it as an artful

**Answer: D**

#### Instructions

Each question has a group of sentences marked A, B, C and D. Arrange these to form a logical sequence.

#### Question 9

- A. We tend to see the similarity within a category as being more important, and the similarity between different categories as being less important, than either actually is.
- B. Given a small amount of information about a person, we are ready to classify them as a member of a particular group, and then to infer all kinds of additional facts about them, as if all members of the group were the same in most respects.
- C. Our tendency to classify and label everything can lead us into the error of seeing the world as made up of only those categories for which we have names.
- D. Expecting too much of the descriptive power of language is itself a serious cause of distorted thinking

- A DCBA
- B DBAC
- C BDAC
- D BCDA

**Answer: A**

#### Question 10

- A. Some of us, as a result, gain an overall impression of people as either all good or all bad, making further assumptions on this basis.
- B. An example of the assumption some patients make that doctors with a good "bedside manner" are also more technically competent as others who do not relate as well to their patients.
- C. This is what the psychologists refer to as halo effect.
- D. We have a strong tendency of associate Positive attributes with other positive attributes and negative ones with each other.

- A DCBA
- B DABC
- C DBCA
- D DACB

**Answer: B**

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#### Question 11

- A. In the past, the customized tailoring units were localized to the township or city and catered exclusively to domestic demand
- B. Traditionally, Indian preferred custom made clothing and the concept of ready to wear is a relatively recent one.
- C. Consumer awareness of styling issues and the convenience afforded by ready to wear helped the RMG industry make small inroads into the domestic market in the 1980s.
- D. The customized tailoring outfits have always been a major source of clothing for domestic market.

- A BDAC
- B BCDA
- C CDBA
- D DBAC

Answer: A

**Question 12**

- A. Participation involves more than the formal sharing of decisions.
- B. Through anticipation, individuals or organizations consider trends and make plans, shielding institutions from trauma of learning by shock.
- C. Innovative learning involves both anticipation and participation.
- D. It is an attitude characterized by the cooperation, dialogue and empathy.

- A ABCD
- B BCDA
- C CBAD
- D DABC

Answer: C

**Instructions**

Each of these questions has a Sentence with four alternatives. Choose the alternative which best conveys the content of the given sentence correctly.

**Question 13**

**No officer had ought to be put into a situation where he has to choose between his love for his family and the responsibilities accompanying his duty.**

- A No officer has ought to be put into a situation in which he has to choose between his love for his family and the responsibilities accompanying his duty
- B No officer had ought to be put into a situation where he has to choose between his love for his family and the responsibilities accompanying his duty
- C No officer should to be put into a situation where he has to choose between his love for his family and the responsibilities accompanying his duty
- D No officer ought to be put into a situation in which he has to choose between his love for his family and the responsibilities accompanying his duty

Answer: D

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**Question 14**

**Being a realist, the detective could not accept the statement of the accused that UFOs has caused the disturbance.**

- A Since he was a realist, the detective could not accept the statement of the accused that UFOs has caused the disturbance
- B being a realist, the detective could not accept the statement of the accused the UFOs had caused the disturbances

- C Being that he was a realist, the detective could not accept the statement of the accused that UFOs had caused the disturbance
- D Realist that he was, the detective could not accept the statement of the accused that UFOs had caused the disturbance

Answer: B

**Question 15**

**Ever since the sting operation, there has been much Opposition from they who maintain that it was an unauthorised act.**

- A Ever since the sting operation, there has been much opposition from they who maintain that it has been an unauthorised act
- B Ever since the sting operation, there has been much opposition from they who maintain that it was an unauthorised act
- C Ever since the sting operation, there has been much Opposition from those who maintain that it was an unauthorised
- D Ever since the sting operation, there has been much Opposition from those maintaining that it was an nauthorised act

Answer: A

**Question 16**

**The trend toward a decrease in the working hours is already evident in the longer weekend given to employees in many multinational organisations**

- A The trend toward a decrease in the working hours is a ready evident in the longer weekend given to employees in many multinational organisations
- B The trend toward a decrease in the working hours is already evident in the longer weekend given to employees in many multinational organisations.
- C The trend toward a decrease in the working hours is a already evident in the longer weekend given to employees in many multinational organisations.
- D The trend toward a decrease in the working hours is all in already evident in the longer weekend given to employees in many multinational organisations.

Answer: B

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**Instructions**

For the following questions answer them individually

**Question 17**

**Many of the junk foods on the market today, doughnuts, burgers and pizza, have less nutrients than natural foods, which were dominant a decade or two ago. Many nutritionists claim that pizza and doughnuts give less nourishment than natural foods. A spokesman of a leading junk food company - pizza House - stated recently that an examination of grade school students shows less nutritional deficiency than in their parents' time. Hence, foods are not as bad as made out to be. Which of the following, if true, would tend to strengthen the view of the spokesman ?**

- A Fewer junk foods were available to the parents.
- B Grade school children reported eating no breakfast at all
- C Adults claim to eat junk foods as well as natural foods.
- D Both (a) and (c)

Answer: A

### Question 18

Throughout the first decade of the 21<sup>st</sup> century, net increase in Indian direct investments in the Far East (funds outflows) exceeded new Far East direct investment in India. Each of the following if true, could help to account for this trend except

- A Labour mobility was higher in India than in the Far East
- B Land values in the Far East were increasing at a faster rate than in India.
- C The cost of labour (wages) was consistently lower in the Far East than in India.
- D Corporate liquidity was lower in India than in the Far East

Answer: A

### Question 19

Of the world's largest AIDS cases countries in 2010, three had the same share of world AIDS patients as they had in 2000. These three countries may serve as examples of countries that succeeded in holding steady their share of the AIDS disease. Which of the following, if true, would most seriously undermine the idea that these countries serve as examples as described above?

- A Countries should strive to reduce their share of the total AIDS patients in the world, rather than try to hold it constant
- B Of the three countries two had a much larger share of world AIDS incidence in 2000 than in 2010
- C The three countries have different rates of population growth.
- D None of the above

Answer: A

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### Question 20

The cost of housing in many urban parts of India has become so excessive that many young couples, with above-average salaries, can only afford small apartments. EMI and rent commitments are so huge that they can not consider the possibility of starting a family since a new baby would probably mean either the mother or father giving up a well paid position-something they can ill afford. The lack of or great cost of child-care facilities further precludes the return of both parents to work.

Which of the following adjustments could practically be made to the situation described above which would allow young couples to improve their housing prospects?

- A Encourage couples to have one child only
- B Encourage couples to remain child less
- C Encourage young couples to move to cheaper areas for living.
- D None of these is likely to have an impact on the current situation.

Answer: C

### Instructions

Read the passage to answer the questions that follows passage.

#### Passage I:

After President George W. Bush signed the United States -India Nuclear Cooperation Bill, he called up Prime Minister Manmohan Singh to tell him how pleased he was at this development. While welcoming this event, the Prime Minister took the opportunity to tell the President that there remained areas of concern that needed to be addressed during the negotiation of the bilateral agreement (called the 123 agreement, after the relevant clause number in the US Atomic Energy Act, 1954) The US has entered into some twenty-five 123 agreements with various countries, including the one concerning Tarapur. The Tarapur agreement concluded in 1963 was unique in that it guaranteed supplies of enriched uranium fuel from the US for running the Tarapur reactors for their entire life. However, after 1987 the

US did not supply fuel saying its domestic legislation under the Nuclear Non- Proliferation Act prevented it from doing so. India argued that Tarapur was an inter-governmental agreement and hence it had to be honoured by the US. Later, US allowed France to supply fuel to India. Subsequently, the USSR (now Russia) and even China supplied fuel for Tarapur. The lesson from the Tarapur episode is that U.S. breached with impunity even a cast iron guarantee it had furnished. Considerable bitterness grew between the U.S. and India and extended to many other areas beyond the nuclear one. When India agreed, reluctantly, in March 2006 to put imported reactors under "safeguards in perpetuity", the US consented to the Indian insistence on assurances of fuel supply. This meant India could build up a stockpile of fuel to tide over disruption in supply and the US and Britain would arrange alternate supplies. The US would agree to work with other countries namely Russia, France, and Britain to arrange alternate supplies. The US legislation, based on the Hyde Bill, forbids India building up a stockpile of Nuclear fuel. It also obligates U.S. administration to work with other nuclear Supplier Group countries to get them to suspend supplies to India, if the U.S. has done so under some provision of the Hyde Bill. It is not evident how the U.S. can address the legitimate concerns of India on continued fuel supply, given the boundaries set by the Hyde Bill. With regard to future nuclear tests, the Prime Minister has said, India is only committed to a voluntary moratorium. A moratorium is only a temporary holding off of an activity, conditioned by specific circumstances obtained at the time when such a declaration was made. It can not be construed as a permanent ban. The Hyde Bill has sought to make the moratorium into a permanent ban. However, there is no such restraint imposed on the US, China, Pakistan or any other country. In bringing up this issue, I do not wish to suggest resumption of tests by India. But India can not prevent other countries from carrying out tests. It is, therefore, unacceptable that India forfeits its right to test for all time to come under the agreement with the US. Even if the 123 agreement is silent on the issue, Indian negotiators must put this issue on the table. The Hyde Bill calls for suspension of all cooperation and fuel supplies and even calls for return of all equipment and materials supplies earlier in the event of test. It baffles one how India can return reactor installations that might have been operated a few years, were such a contingency to arise in future. The differences over the definition of "full civilian nuclear cooperation" have been discussed in the media. The Indian understanding was that reprocessing of spent fuel, enrichment of uranium, and production of heavy water also formed part of the term "full civilian nuclear cooperation." In the congressional debate, it has been noted that these were construed by the US to be in the nature of military activities and not civilian, India's future plans for thorium utilisation for civil nuclear power depend crucially on reprocessing. Similarly, civil nuclear power units using natural uranium require heavy water as reactor coolant and moderator. Equally if India were to embark on a sizeable light water reactor programme, it may like to have control on supply of enriched uranium for economic and supply security reasons. India has technologies of its own in these areas and will develop them further in the years ahead. If the Indo-US agreement moves ahead in the manner its sponsors have speculated, in a few decades from now some 90 per cent of the nuclear installations in India would be open to International Atomic Energy Agency inspections. In that scenario, how can India reconcile to the embargo from nuclear advanced countries on the export of enrichment, reprocessing and heavy water technologies. Even if the issue were to be papered over now, it will then look from India's point of view to have been a very bad bargain.

#### Question 21

What is the Indian understanding of the definition of "full civilian nuclear cooperation"?

- A Enrichment of uranium
- B Reprocessing of spent fuel
- C Production of heavy water
- D All of the above

Answer: D

#### Question 22

With reference to the passage, select which of the following statement(s) is/are incorrect ?

A: US did not supply fuel to India after 1987.

B: The Hyde bill calls for suspension of all cooperation and fuel supplies.

C: India can prevent other countries from carrying out the test.

- A A and B
- B B only
- C A and C
- D A, B and C

Answer: D



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### Question 23

What was the uniqueness of the Tarapur agreement that was concluded in 1963?

- A It guaranteed supplies of enriched uranium fuel from the US for running the Tarapur reactors for entire life
- B It prevented other countries from carrying out nuclear tests
- C It addresses the legitimate concerns of India on fuel supply
- D All of the above

Answer: A

### Question 24

Which of the following countries supplied fuel for Tarapur?

- A France
- B USA
- C USSR and France
- D France, USSR and China.

Answer: D

### Instructions

Read the passage to answer the questions that follows passage.

### Passage II:

Not even a three-day brainstorming session among top psychologists at the Chinese University could unravel one of the world's greatest puzzles-how the Chinese mind ticks. Michael Bond had reason to pace the pavement of the Chinese University campus last week. The psychologist

who co-ordinated and moderated a three day seminar in Chinese psychology and most of the participants came a long way to knock head. "If a bomb hits this building, muttered Bond, half-seriously, "it would wipe out the whole discipline." But the only thing that went off in the Cho Yiu. Conference hall of Chinese University was the picking of brains, the pouring out of brains and a refrain from an on-going mantra: "More work needs to be done' or 'we don't know." Each of the 36 participants was allowed 30 minutes plus use of an over-head projector to condense years of research into data and theories. Their contents spilled over from 20 are as of Chinese behaviour, including reading, learning styles, sychopathology, social interaction personaticty and modernisation. An over-riding question for observers, however, was why, in this group of

21 Chinese and 15 non-Chinese, weren't there more professionals from mainland China presenting research on the indigenous people? Michael Philips, a psychiatrist who works in Hubei Province, explained: "The Cultural Revolution silenced and froze the research", said the

Canadian born doctor who has lived and worked in China for more then 10 years. "And 12 years later, research is under way but it is too early to have anything yet. Besides, most of the models being used are from the West anything." In such a specialised field, how can non-Chinese academics do research without possessing fluency in Chinese? These who cannot read, write or speak the language usually team up with Chinese colleagues. "In 10 years, we won't be able to do this. It's a money thing," said William Gabrenya of Florida Institute of Technology, who described him self as an illiterate Gweilo who lacks fluency in Chinese. Dr. Gabrenya raised questions such as why is research dependent on university students, why is research done on Chinese people in coastal cities (Singapore, Taiwan, Shanghai and Hong Kong) but not in land? "Chinese psychology is too on fucian, too neat. He's been dead a long time. How about the guy on a motorcycle in Taipei?" Dr. Gabrenya said, urging that research have a more contemporary outlook.

The academics came from Israel, Sweden, Taiwan, Singapore, United States, British Columbia and, of course, Hong Kong. Many of the visual aids they used by way of illustration contained eye-squinting type and cobweb-like graphs. One speaker, a sociologist from Illionios, even warned her colleagues that she would not give anyone enough time to digest the long, skinny columns of numbers. Is Chinese intelligence different from Western? For half of the audience who are illiterate in Chinese, Professor Jimmy Chan of HKU examined each of the Chinese characters for "intelligence". Phrases such as "a mind as fast as an arrow" and connections between stokes for sun and the moon were made. After his 25-minute

speech, Chan and the group lamented that using Western tests are the only measure available to psychologists, who are starving for indigenous studies of Chinese by Chinese. How do Chinese children learn? David Kember of Hong Kong Polytechnic University zeroed in on deep learning

versus surface. Deep is when the student is sincerely interested for his own reasons. Surface is memorizing and spitting out facts, It doesn't nurture any deep understanding. If the language of instruction happens to be the children's second language, students in Hong Kong have all sorts of challenges with English-speaking teachers from Australia, Britain and America with accents and colloquialisms. Do Westerners have more self-esteem than Chinese? Dr. Leung Kwok, Chairman of the psychology department of Chinese University, points his finger at belief systems: The collectivist mind-set often stereotypes Chinese unfairly. The philosophy of "yuen" (a concept used to explain good and bad events which are pre-determined and out of the individual's control does not foster a positive self-concept. Neither do collectivist beliefs, such as sacrifice for the group, compromise and importance of using connections. "If a Chinese loses or fails, he has a stronger sense of responsibility. He tends to blame it on himself. A non-Chinese from the West may blame it on forces outside himself", Dr. Leung said. By the end of the three day session, there were as many questions raised as answered. It was agreed there was room for further research. To the layman, so much of the discussion was foreign and riddled with jargon and on-going references to studies and researchers. The work of the participants will resource in a forthcoming handbook of Chinese Psychology, which will be edited by Dr. Bond and published by Oxford University Press.

#### Question 25

According to the passage the author suggests that

- A not many people study Chinese psychology
- B the building is in danger of attack
- C Chinese psychology is a difficult subject to organize
- D Chinese psychology is difficult subject to organize

Answer: C

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#### Question 26

It can be inferred from the passage that

- A the Cultural Revolution was a productive period for Chinese psychology
- B the Cultural Revolution was a dangerous period for Chinese psychology
- C the Cultural Revolution was an unproductive period for Chinese psychology
- D the Cultural Revolution was a new beginning for Chinese psychology

Answer: C

#### Question 27

According to the passage, William Gubrenya refers to himself as an 'illiterate gweilo'. This suggests that

- A he feels defensive about not speaking and reading Chinese
- B he feels secure in his illiteracy
- C he is representative of other Westerners active in this field
- D he can operate perfectly well without learning Chinese

Answer: A

**Question 28**

According to the passage, all of the following are true except

- A the visual aids were not very easy to understand
- B the conference attracted a very professional standard of presentation
- C the visual aids were not very tidy
- D the presenters were under time pressure

**Answer: B**

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**Question 29**

According to the passage which of the following is not true?

- A Chinese characters are very difficult for Westerners to master
- B It is difficult to come to a conclusion about western and Chinese intelligence
- C It is difficult to measure Chinese intelligence with western tests
- D More tests are required that are conducted by the Chinese for the Chinese

**Answer: A**

**Instructions**

Read the passage to answer the questions that follows passage.

**Passage III:**

"Since wars begin in the minds of men," so runs the historic UNESCO Preamble, "It is in the minds of men that the defences of peace must be constructed." Wars erupt out when the minds of men are inflamed, when the human mind is blinded and wounded, succumb to frustration and self-negation. War is the transference of this self-negation into the other-negation. The three Indo-Pak wars and the persisting will to terrorise have emanated from this savage instinct of other-negation that is the legacy of the partition carnage and its still-bleeding and unhealed wound,

Truncated from its eastern wing in 1971, Pakistan ever since has suffered from a sense of total existential self-negation. Plus the scars left by the two previously lost wars to India and Kargil fill the Army and the Pakistan psyche with a seething urge to revenge: that Indian has to

be negated, destroyed — in a deep psychological sense, another Hiroshima in the subcontinent is imaginable and possible. Terrorism in Kashmir springs from such deep negating existential grounds. Like the former Soviet Union, Pakistan came into being as a result of a grand delusion and

massive perversion of reality — the so called two-nation theory. Like the former Soviet Union, it stands in danger of crumbling unless it modifies its reality perception and comes to terms with its post-Bangladesh identity within the prevailing subcontinental equation. Failing this, Pakistan is bound to break up, nudging the region to a nuclear nightmare, including, possible South Asian Hiroshimas.

With 'hot pursuits' and 'surgical operations' freely making rounds among the policy elite and the public at large, the national atmosphere looks ominously charged. "On the

brink," headlines The Week adding, "As men and machines are quickly positioned by India and Pakistan, the threat of war looms real." To which Gen. Musharraf counters, "If any war is thrust on Pakistan, Pakistan's armed forces and the 140 million people of Pakistan are fully prepared to face all consequences with all their might." According to Indian Express, "Pakistan has deployed medium range ballistic missile batteries (MRBBs) along the Line of Control (LOC) near Jammu and Poonch sectors in a action that will further escalate the tension between the two countries."

And India's Defence Minister ups the ante, "We could take a (nuclear) strike, survive and then hit back, Pakistan would be finished." (Hindustan Times, December 30, 2001). Mr. Fernandes's formulation is certainly a tactical super shot, even a strategical super hit in as much as this is

the very logic of India's 'No-first-strike' doctrine. The Defence Minister obviously has no idea of the ethical, phenomenological implications of abandoning chunks of the Indian population to ransom for potential Hiroshimas and then 'finishing' the neighbouring country of 140 in

what could be nothing short of an Armageddon. Forget these horrendous scenarios. But does this not repudiate the grain of truth for

which India's civilisation stood for and vindicated across the untold millennia of its history? Yet, Mr. Fernandes, the pacifist and Gandhian, is no warmonger. As Defence Minister he had to react at a level with the Pakistanis, with their proclivity to drop the nuclear speak whenever that suited them, could have.

**Question 30**

**According to the passage, Pakistan is bound to disintegrate I. and it will throw the subcontinent into a nuclear backlash.**

**II. if it refuses to accept its present identity.**

**III. if it does not stop fuelling terrorism in Kashmir.**

- A II and III are correct
- B I, II and III are correct
- C I and II are correct
- D I and III are correct

**Answer: C**

**Question 31**

**It can be inferred from the passage that**

- A Soviet Union crumbled as a result of the grand delusion of the two nation theory
- B Soviet Union also came into being as a result of the two nation theory
- C Soviet Union's disintegration was due to her failure to accept the reality
- D The ideological basis of creation of Soviet Union and Pakistan was the same

**Answer: C**

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**Question 32**

**According to the passage, the reason for terrorism in Kashmir is**

- A Pakistan's perception of two-nation theory
- B Pakistan's blind faith in terrorism
- C Pakistan's sense of self-negation
- D Both (b) and (c)

**Answer: C**

**Question 33**

**According to the passage, all of the following about the defence minister are not true, except**

- A He is not a Gandhian
- B He is not logical
- C He is a pacifist
- D He is not a warmonger

Answer: C

## Instructions

Read the passage to answer the questions that follows passage.

### Passage IV:

Mobility of capital has given an unprecedented leverage to companies not only to seek low paid, informal wage employees across national boundaries, but the threat of capital flight can also serve to drive down wages and place large numbers of workers in insecure, irregular employment. Informalisation strategies enable employers to draw on the existing pool of labour as and when they require, without having to make a commitment to provide permanent employment or any of the employee-supporting benefits associated with permanent jobs. As far as the working class is concerned, informalisation is in fact, a double-edged sword. For not only is the employee denied the rights associated with permanent employment, but the nature of casual work essentially destroys the foundations of working class organisation. As workmen move from one employer to another, numbers are scattered, everyday interests become divergent, and individualized survival takes precedence over group or collective struggles. Even workers who have been in sectors with a long tradition of unionization are difficult to organise once they are removed from the arena of permanent employment. About 50,000 textile mill workers in Ahmedabad city were laid off during the late 1980s and early 1990s. The move to obtain compensation and rehabilitation for these workers floundered on the weakness of the struggle, as numbers of workers who were available for pressing their claims and taking to some kind of activism dwindled, the motivation of leaders declined and the struggle slowly frittered away. If this is the situation with workers familiar with the concept of unionisation, the task of organising vast masses of casual workers who have never been organised, is obviously much more difficult. The problem, essentially, is not only that of organising workers for struggle, but given the wansitory nature of casual employment, employers are not bound to provide insurance of any kind, and frequently, there is no fixed employer against whom workers' claims can be pressed. In this context, the formation of the National Centre for Labour (NCL) can be seen as a landmark in the history of the working class movement in India. The NCL is an apex body of independent trade unions working in the unorganised sector of labour, registered under the Indian Trade Union Act, 1926. Through its constituent members, the NCL represents the interests of workers in construction, agriculture, fisheries, forests, marble and granite manufacturing, self-employed workmen, contract workers, anganwadi and domestic workers, as also in the tiny and small-scale industries. The NCL, launched in 1995, has about 6,25,000 members spread over 10 states in India. The NCL reflects two tendencies. First, the formation of such a federation highlights that despite the problems in organising workers in the informal sector, there have in fact, been a rage of organisations which have sought to address these issues. On a collective plane, their activities represent a marked departure from the traditional way of conceptualising union activities exclusively around organised or formal sector workers. Thus, the unionisation of the hitherto unorganised sector has become inserted into the political universe as a possible and legitimate activity. Second formation of the NCL, to an extent, overturns the pessimistic logic that the interests of the unorganised sector—given their diverse and inchoate form—cannot be articulated from a single platform. For the NCL aims precisely, do not only provide an anchoring for these diverse organisations, but more importantly, to articulate the need for institutionalised norms of welfare which can apply to the unorganised sector as a whole. It is in the context of this generalised movement that one needs to view recent efforts to bring in legislative acts which seek to create a new framework of laws and institutions addressing the needs of the unorganised sector. One of the major problems that has dogged this sector has of course been that of implementation. Thus, for example, while there is a stipulated minimum wages for most industries, this is frequently flouted by employers, a central objective of the NCL has been to advocate legislation to create agencies, which would mediate between the employer and the employee, to institutionalise certain guarantees of welfare and security to the employee. Thus, for example, the State Assisted Scheme of Provident Fund for Unorganised Workers, 2000 proposed by the Labour Department of the Government of West Bengal, introduces the mechanism of a Fund which will be contributed to by the worker (wage-earner or self-employed person), the employer, and the Government and to which the worker would be entitled at the age of 55 or above. By registering a worker to this programme and issuing an identity card, the initial hurdle of identifying a large mass of scattered workers is overcome and a step is taken towards institutionalising their legitimate claims against the employers and from the state. The Karnataka Unorganised Workers (Regulation of employment and Conditions of Work) Bill, 2001, offers a more comprehensive framework for addressing the unorganised sector's needs. It envisages the formation of a fund and a Board, in each sector. The Board, consisting of members from the Government, employers and employees, would be responsible for administering the Fund. Employers must compulsorily pay towards the Fund, a certain fixed percentage of the wages or taxes payable by them, or a certain percentage of the cost of their project, (for example, in construction projects). The concept of the Fund is designed to create the financial viability of social security for workers, and to provide a structure for employers' contribution. Thus, workers would be insured for accident and illness, old age and to unemployment. The Board is designed to provide a mechanism to ensure the working of the Fund, and essentially, to institutionalise workers' claims against employers through an empowered agency. In the broader context of economic liberalization, recently proposed labour reforms seek to extend the scope of contract employment and to facilitate worker lay-off. As casualisation of labour now seems an irreversible trend, the Bills outlined above would appear to be the only way to ensure workers' interest. To this extent, organizations such as the NCL, which have systematically struggled to push for such legislation, are serving an invaluable historical purpose. As the Karnataka Unorganised Workers Bill awaits endorsement during the Assembly sessions being held currently for the protagonists of the movement, this would be a watershed, but, nevertheless only a moment on a struggle that needs to be waged at multiple points and to evolve to newer heights.

**Question 34**

**According to the passage, the Proposed labour reforms**

- A will provide a much needed thrust to liberalization
- B will encourage the Practice of hiring laboures on a contract basis
- C have resulted in casulisation of labour
- D seek to extend the scope of employment and to facilitate worker retrenchment

**Answer: C**

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**Question 35**

**According to the Passage, textile mill workers could not obtain compensation because**

- A the number of workers available for pressing their claims was not adequate
- B they were not united
- C of the weak ness of the struggle
- D the motivation of the leaders was very low

**Answer: C**

**Question 36**

**According to the passage, the I most important aspectof the NCL is that**

- A it has given a voice to the interests of workers in the unorganized sector
- B it is an apex body of independent trade unions
- C it has 6,25,000 members spread over 10 states in India
- D it is the only baby of its kind in India

**Answer: A**

**Instructions**

Each of these questions has four underlined parts, Identify the part which is not correct

**Question 37**

**No sooner he left office/(a) then it started/(b) raining heavily/(c) nough to make him completely wet/(d)**

- A (a)
- B (b)
- C (c)
- D (d)

**Answer: A**

## MAT Free Solved Previous Papers

### Question 38

Even after hearing the leader/(a) for a long time/(b) the followers could not make out/(c) which was talking about/(d)

- A (a)
- B (b)
- C (c)
- D (d)

Answer: D

### Question 39

The principal, along with the teachers/(a) were seen boarding a bus/(b) to go to a picnic/(c) on national holiday/(d)

- A (a)
- B (b)
- C (c)
- D (d)

Answer: B

### Question 40

With the introduction of the new syllabus/(a) the number of colleges reporting/(b) high results are decreasing/(c) year after year/(d)

- A (a)
- B (b)
- C (c)
- D (d)

Answer: C

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## Mathematical Skills

### Instructions

For the following questions answer them individually

### Question 41

A man received Rs. 12000 as Puja Bonus. He invested a part of it at 5% per annum and the remaining at 6% per annum, simple interest being allowed in each case. The total interest earned by him in 4 years is Rs. 2580. The sum invested at 5% per annum is

- A Rs. 4500
- B Rs. 4000
- C Rs. 7500

D Rs. 8000

Answer: C

Explanation:

Let sum invested at 5% be Rs.  $100x$  and sum invested at 6% be Rs.  $(12000 - 100x)$  and time period = 4 years

$$\text{Simple interest} = \frac{P \times R \times T}{100}$$

According to ques,

$$\Rightarrow \left( \frac{100x \times 5 \times 4}{100} \right) + \left( \frac{(12000 - 100x) \times 6 \times 4}{100} \right) = 2580$$

$$\Rightarrow 20x + 24(120 - x) = 2580$$

$$\Rightarrow 20x - 24x + 2880 = 2580$$

$$\Rightarrow 4x = 300$$

$$\Rightarrow x = \frac{300}{4} = 75$$

$\therefore$  Sum invested at 5% per annum =  $100 \times 75 = \text{Rs. } 7500$

$\Rightarrow$  Ans - (C)

## Free Gk Tests

Question 42

A finance company declares that, at a certain compound interest rate, a sum of money deposited by anyone will become 8 times in three years. If the same amount is deposited at the same compound rate of interest, then in how many years will it become 16 times?

A 5 years

B 4 years

C 6 years

D 7 years

Answer: B

Explanation:

Under compound interest, money will become 8 times in 3 years. Let it takes  $t$  years to become 16 times.

Substituting values in the formula =  $(x)^{\frac{1}{a}} = (y)^{\frac{1}{b}}$

$$\Rightarrow (8)^{\frac{1}{3}} = (16)^{\frac{1}{t}}$$

$$\Rightarrow (2)^1 = (2)^{\frac{4}{t}}$$

Comparing the exponents, we get :  $t = 4$  years

$\Rightarrow$  Ans - (B)

Question 43

In an examination, a pupil's average marks were 63 per paper. If he had obtained 20 more marks for his Geography paper and 2 more marks for his History paper, his average per paper would have been 65. How many papers were there in the examination?

A 9

B 8

C 10

D 11

Answer: D



**Explanation:**

Let number of papers be  $x$  and total marks in all papers =  $63x$

According to ques,

$$\Rightarrow \frac{63x+20+2}{x} = 65$$

$$\Rightarrow 63x + 22 = 65x$$

$$\Rightarrow 2x = 22$$

$$\Rightarrow x = \frac{22}{2} = 11$$

$\Rightarrow$  Ans - (D)

**Question 44**

A boat man rows to a place 45 km distant and back in 20 hours. He finds that he can row 12 km with the stream in the same time as 4 km against the stream. Find the speed of the stream.

- A 3 km/h
- B 2.5 km/h
- C 4 km/h
- D Cannot be determined

**Answer:** A

**Explanation:**

Let speed of man in still water =  $x$  km/hr and speed of stream =  $y$  km/hr

According to ques, time taken in 12 km downstream = Time taken 4 km upstream

$$\Rightarrow \frac{12}{x+y} = \frac{4}{x-y}$$

$$\Rightarrow 3x - 3y = x + y$$

$$\Rightarrow 2x = 4y$$

$$\Rightarrow x = 2y \text{-----(i)}$$

Also,  $\frac{45}{x+y} + \frac{45}{x-y} = 20$

$$\Rightarrow \frac{15}{y} + \frac{45}{y} = 20$$

$$\Rightarrow 20y = 60$$

$$\Rightarrow y = \frac{60}{20} = 3$$

$\therefore$  Speed of stream = **3 km/hr**

$\Rightarrow$  Ans - (A)

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**Question 45**

Two cyclists start on a circular track from a given point but in opposite directions with speeds of 7 m/s and 8 m/sec respectively. If the circumference of the circle is 300 m, after what time will they meet at the starting point?

- A 100 s
- B 20 s
- C 300 s

D 200 s

Answer: C

**Explanation:**

Speed of A = 7 m/s and speed of B = 8 m/s

Time taken by A to complete 1 round =  $\frac{300}{7}$  sec

Time taken by B to complete 1 round =  $\frac{300}{8}$  sec

=> Meeting at STARTING POINT = L.C.M.  $(\frac{300}{7}, \frac{300}{8})$

=  $\frac{300}{1} = 300$  seconds

=> Ans - (C)

**Question 46**

In a objective examianation of 90 questions, 5 marks are allotted for every correct answer and 2 marks are deducted for every wrong answer. After attempting all the 90 questions a student got a total of 387 marks. Find the number of questions that he attempted wrong.

A 36

B 18

C 9

D 27

Answer: C

**Explanation:**

Let number of questions attempted wrong be  $x$ , and number of questions attempted correct be  $(90 - x)$

According to ques,

=>  $5(90 - x) - 2x = 387$

=>  $450 - 5x - 2x = 387$

=>  $7x = 63$

=>  $x = \frac{63}{7} = 9$

=> Ans - (C)

**Question 47**

Ram went to shop to buy 50 kg of rice. He buys two kinds of rice which cost him Rs. 4.50 per kg and Rs. 5.00 per kg. He spends a total of Rs. 240. What was the quantity of rice bought which cost him Rs. 4.50 per kg

A 25 kg

B 30 kg

C 20 kg

D Noneof the above

Answer: C

**Explanation:**

Let quantity of rice bought at Rs 4.50 per kg be  $x$  kg and at Rs 5 per kg be  $(50 - x)$  kg

According to ques,

$$\Rightarrow 4.5x + 5(50 - x) = 240$$

$$\Rightarrow 4.5x + 250 - 5x = 240$$

$$\Rightarrow 0.5x = 10$$

$$\Rightarrow x = \frac{10}{0.5} = 20 \text{ kg}$$

$\Rightarrow$  Ans - (C)

## MAT Free Solved Previous Papers

### Question 48

Seema invested an amount of RS 16,000 for two years on compound interest and received an amount of Rs 17,640 on maturity. What is the rate of interest?

- A 5 pcpa
- B 8 pcpa
- C 4 pcpa
- D Data inadequate

**Answer: A**

### Explanation:

Principal sum = Rs. 16000 and time period = 2 years. Let rate of interest =  $r\%$

Amount under Compound interest =  $P(1 + \frac{r}{100})^T$

$$\Rightarrow 16,000(1 + \frac{r}{100})^2 = 17,640$$

$$\Rightarrow (1 + \frac{r}{100})^2 = \frac{17640}{16000}$$

$$\Rightarrow 1 + \frac{r}{100} = \sqrt{1.1025}$$

$$\Rightarrow \frac{r}{100} = 1.05 - 1 = 0.05$$

$$\Rightarrow r = 0.05 \times 100 = 5\%$$

$\Rightarrow$  Ans - (A)

### Question 49

My Scooty gives an average of 40 km/L of petrol. But after recent filling at the new petrol pump, its average dropped to 38 km/L. I investigated and found out that it was due to adulterated petrol. Petrol pump add Kerosene, which is  $\frac{2}{3}$  cheaper than petrol, to increase their profits. Kerosene generates excessive smoke and knocking and gives an average of 18 km per 900 ml. If I paid Rs. 30 for a liter of petrol, what was the additional amount the pump-owner was making?

- A Rs. 1.75
- B Rs. 1.80
- C Rs. 2.30
- D Rs. 2

**Answer: D**

### Explanation:

Let  $x$  ml of kerosene be there in 1 litre mixture,  $\Rightarrow$  Quantity of petrol in 1 litre mixture =  $(1000 - x)$  ml

$$\Rightarrow \text{Required average} = \frac{40}{1000}(1000 - x) + \frac{18}{900}x = 38$$

$$\Rightarrow \frac{x}{25} - \frac{x}{50} = 2$$

$$\Rightarrow x = 100$$

So, 1 litre mixture has 900 ml petrol and 100 ml kerosene.

Also, cost of 1 litre petrol = Rs. 30 and 1 litre kerosene =  $30 - \frac{2}{3} \times 30 = \text{Rs. } 10$

$$\Rightarrow \text{Cost of 1 litre mixture} = \left(\frac{30}{1000} \times 900\right) + \left(\frac{10}{1000} \times 100\right)$$

$$= 27 + 1 = \text{Rs. } 28$$

$\therefore$  Additional amount earned by pump-owner = Rs. (30-28) = **Rs. 2**

$\Rightarrow$  Ans - (D)

#### Question 50

A train after travelling 150 km meets with an accident and then proceeds at  $\frac{3}{5}$  km of its former speed arrives at its destination 8 hours late. Had the accident occurred 360 km further, it would have reached the destination 4 hours late. What is the total distance travelled by the train?

A 960 km

B 870 km

C 840 km

D 1100 km

Answer: B

#### Explanation:

Let initial speed of train be  $5x$  km/hr and total distance travelled be  $d$  km

$$\text{According to ques, } \Rightarrow \frac{150}{5x} + \frac{(d-150)}{3x} = \frac{d}{5x} + 8$$

$$\Rightarrow \frac{30}{x} - \frac{50}{x} + \frac{d}{3x} - \frac{d}{5x} = 8$$

$$\Rightarrow \frac{2d}{15} - 8x = 20 \text{ -----(i)}$$

$$\text{Similarly, } \frac{510}{5x} + \frac{(d-510)}{3x} = \frac{d}{5x} + 4$$

$$\Rightarrow \frac{102}{x} - \frac{170}{x} + \frac{d}{3x} - \frac{d}{5x} = 4$$

$$\Rightarrow \frac{2d}{15} - 4x = 68 \text{ -----(ii)}$$

Subtracting equation (i) from (ii), we get :  $4x = 48$

$$\Rightarrow x = 12$$

$$\text{Substituting above value in equation (i), } \Rightarrow \frac{2d}{15} = 20 + 96$$

$$\Rightarrow d = 58 \times 15 = 870 \text{ km}$$

$\Rightarrow$  Ans - (B)

$$\text{SHORTCUT METHOD (to find original speed)} = \frac{360}{3x} - \frac{360}{5x} = 4 \Rightarrow x = 12$$

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#### Question 51

In an engineering college the average salary of all engineering graduates from Mechanical trade is Rs 2.45 lacs per annum and that of the engineering graduates from Electronics trade is Rs 3.56 lacs per annum. The average salary of all Mechanical and Electronics graduates is Rs 3.12 lacs per annum. Find the least number of Electronics graduates passing out from this institute.

A 43

- B 59
- C 67
- D Cannot be determined

**Answer: C**

**Explanation:**

Let number of Electronic graduates be  $x$  and number of mechanical graduates be  $y$

According to ques,

$$\Rightarrow 3.56x + 2.45y = 3.12(x + y)$$

$$\Rightarrow 356x + 245y = 312x + 312y$$

$$\Rightarrow 44x = 67y$$

$$\Rightarrow \frac{x}{y} = \frac{67}{44}$$

$\therefore$  67 and 44 are co-primes, hence minimum value of  $x$  and  $y$  are 67 and 44 respectively. (Both must be integers)

$\therefore$  Minimum number of Electronic Graduates = 67

$\Rightarrow$  Ans - (C)

**Question 52**

There are two identical vessels X and Y. X is filled with water to the brim and Y is empty. There are two pails A and B, such that B can hold half as much water as A. One operation is said to be executed when water is transferred from Y to X using A once and water is transferred to Y from X using B once. If A can hold  $\frac{1}{2}$  liter of water and it takes 40 operations to equate the water level in X and Y, what is the total volume of water in the system?

- A 20 L
- B 10 L
- C 40 L
- D  $20\frac{3}{4}$  L

**Answer: C**

**Question 53**

In a class with a certain number of students, if one student weighing 50 kg is added then the average weight of the class increases by 1 kg. If one more student weighing 50 kg is added then the average weight of the class increases by 1.5 kg over the original average. What is the original average weight (in kg) of the class?

- A 4
- B 46
- C 2
- D 47

**Answer: D**

**Explanation:**

Let number of students in class be  $x$  and average weight of class be  $y$  kg

$$\Rightarrow \text{Total weight of class} = xy \text{ kg}$$

According to ques,  $\Rightarrow \frac{xy+50}{x+1} = y + 1$

$$\Rightarrow xy + 50 = xy + x + y + 1$$

$$\Rightarrow x + y = 49 \text{ -----(ii)}$$

Similarly,  $\frac{xy+100}{x+2} = y + 1.5$

$$\Rightarrow xy + 100 = xy + 1.5x + 2y + 3$$

$$\Rightarrow 1.5x + 2y = 97 \text{ -----(ii)}$$

Solving equations (i) and (ii), we get :  $x = 2$  and  $y = 47$

$\therefore$  Original average weight = **47 kg**

$\Rightarrow$  Ans - (D)

## Free Gk Tests

### Question 54

The average monthly salary of employees, consisting of officers and workers, of an organisation is Rs 3,000. The average salary of an officer is Rs 10,000 while that of a worker is Rs 2,000 per month. If there are total 400 employees in the organisation, find the number of officers

A 60

B 50

C 80

D 40

Answer: B

#### Explanation:

Let number of officers be  $x$  and number of workers be  $(400 - x)$

According to ques,

$$\Rightarrow (10,000 \times x) + 2,000 \times (400 - x) = 3,000 \times 400$$

$$\Rightarrow 10,000x + 8,00,000 - 2000x = 12,00,000$$

$$\Rightarrow 8000x = 4,00,000$$

$$\Rightarrow x = 50$$

$\therefore$  Number of officers = **50**

$\Rightarrow$  Ans - (B)

### Question 55

Two vessels contain mixtures of milk and water in the ratio of 8 : 1 and 1 : 5 respectively. The contents of both of these are mixed in a specific ratio into a third vessel. How much mixture must be drawn from the second vessel to fill the third vessel (capacity 26 gallons) completely in order that the resulting mixture may be half milk and half water?

A 12 gallons

B 14 gallons

C 10 gallons

D 13 gallons

Answer: B

#### Explanation:

Let the mixture drawn from 1st vessel be  $9x$  gallons and from 2nd vessel be  $6y$  gallons

Now, in the third vessel (26 gallons), quantity of milk = 13 gallons and water = 13 gallons

According to ques, milk from first two vessels =  $8x + y = 13$  -----(i)

and water =  $x + 5y = 13$  -----(ii)

Solving the two equations, we get :  $x = \frac{4}{3}$  and  $y = \frac{7}{3}$

$\therefore$  Mixture taken from second vessel =  $6 \times \frac{7}{3} = 14$  gallons

=> Ans - (B)

#### Question 56

A man can row 4.5 km/h in still water and he finds that it takes him twice as long to row up as to row down the river. Find the rate of the Stream.

A 1.5 km/h

B 2 km/h

C 2.5 km/h

D 1.75 km/h

Answer: A

#### Explanation:

Let speed of stream be  $x$  km/hr

=> Downstream speed =  $(4.5 + x)$  km/hr and Upwntstream speed =  $(4.5 - x)$  km/hr

According to ques,

$$\Rightarrow 2 \times (4.5 - x) = 1 \times (4.5 + x)$$

$$\Rightarrow 9 - 2x = 4.5 + x$$

$$\Rightarrow 3x = 4.5$$

$$\Rightarrow x = \frac{4.5}{3} = 1.5$$

$\therefore$  Speed of stream = 1.5 km/hr

=> Ans - (A)

## Daily Free Topic Test

#### Question 57

The work done by a woman in 8 hours is equal to the work done by a man in 6 hours and by a boy in 12 hours. If working 6 hours per day 9 men can complete a work in 6 days, then in how many days can 12 men, 12 women and 12 boys together finish the same work, woking 8 hours per day?

A  $3\frac{2}{3}$  days

B  $4\frac{1}{2}$  days

C 3 days

D  $1\frac{1}{2}$  days

Answer: D

#### Explanation:

Ratio of time taken by a woman, man and a boy = 8 : 6 : 12

= 4 : 3 : 6

=> 4 women  $\equiv$  3 men  $\equiv$  6 boys

Similarly, 12 men + 12 women + 12 boys  $\equiv$  (12) + (9) + (6) men = 27 men

Let time taken by 12 men, 12 women and 12 boys (or 27 men) be  $x$  days

$$\Rightarrow 9 \times 6 \times 6 = 27 \times 8 \times x$$

$$\Rightarrow x = \frac{54 \times 6}{27 \times 8} = 1.5$$

$\therefore$  Number of days required =  $1\frac{1}{2}$  days

=> Ans - (D)

#### Question 58

A team of workers was employed by a contractor who under took to finish 360 pieces of an article in a certain number of days, Making four more pieces per day than was planned, they could complete the job a day ahead of schedule. How many days did they take to complete the Job?

A 10 days

B 8 days

C 9 days

D 12 days

Answer: A

#### Explanation:

Let initial number of days planned be  $x$ , then number of pieces done per day =  $\frac{360}{x}$

According to ques,

$$\Rightarrow x \times \frac{360}{x} = (x - 1) \times \left(4 + \frac{360}{x}\right)$$

$$\Rightarrow 4x - 4 + 360 - \frac{360}{x} = 360$$

$$\Rightarrow 4x^2 - 4x - 360 = 0$$

$$\Rightarrow x^2 - x - 90 = 0$$

$$\Rightarrow (x - 10)(x + 9) = 0$$

$$\Rightarrow x = 10, -9$$

$\therefore x$  cannot be negative, => Number of days taken = **10 days**

=> Ans - (A)

#### Question 59

Rahul can row a certain distance downstream in 6 hours and return the same distance in 9 hours. If the speed of Rahul in still water is 12 km/h, find the speed of the stream.

A 2 km/h

B 2.4 km/h

C 3 km/h

D Data inadequate

Answer: B

#### Explanation:



Speed of Rahul = 12 km/hr and let speed of stream =  $x$  km/hr

=> Downstream speed =  $(12 + x)$  km/hr and Upstream speed =  $(12 - x)$  km/hr

According to ques, since distance in both cases is same and distance = time  $\times$  speed

$$\Rightarrow 6 \times (12 + x) = 9 \times (12 - x)$$

$$\Rightarrow 72 + 6x = 108 - 9x$$

$$\Rightarrow 15x = 36$$

$$\Rightarrow x = \frac{36}{15} = 2.4$$

$\therefore$  Speed of stream = 2.4 km/hr

=> Ans - (B)

## MAT Free Solved Previous Papers

### Question 60

Large, medium and small ships are used to bring water. 4 large ships carry as much water as 7 small ships. 3 medium ships carry the same amount of water as 2 large ships and 1 small ship, 15 large, 7 medium and 14 small ships, each made 36 journeys and brought a certain quantity of water. In how many journeys would 12 large, 14 medium and 21 small ships bring the same quantity?

A 32

B 25

C 29

D 49

Answer: C

### Explanation:

Let  $L$  = Large ships,  $M$  = Medium ships and  $S$  = Small ships

According to ques,  $\Rightarrow 4L = 7S$

$$\Rightarrow \frac{L}{S} = \frac{7}{4}$$

$$\Rightarrow L = 7x \text{ and } S = 4x$$

$$\text{Also, } 3M = 2L + S$$

$$\Rightarrow M = \frac{2 \times 7x + 4x}{3} = 6x$$

Thus, ratio of large : medium : small = 7:6:4

$$\therefore \text{Number of journeys required} = \frac{(15 \times 7) + (7 \times 6) + (14 \times 4)}{(12 \times 7) + (14 \times 6) + (21 \times 4)} \times 36$$

$$= \frac{7308}{252} = 29$$

=> Ans - (C)

### Question 61

A train 300 m long is running at a speed of 90 km/h. How many seconds will it take to cross a 200 m long train running in the opposite direction at a speed of 60 km/h?

A  $7\frac{1}{5}$

B 60

C 12

D 20

**Answer: C**

**Explanation:**

Relative speeds of train (running in opposite directions) =  $90 + 60 = 150 \text{ km/hr} = 150 \times \frac{5}{18} = \frac{125}{3} \text{ m/s}$

Lengths of train =  $300 + 200 = 500 \text{ m}$

$\therefore$  Time taken =  $\frac{500}{\frac{125}{3}} = 4 \times 3 = 12 \text{ sec}$

=> Ans - (C)

**Question 62**

Out of eight crew members three particular members can sit only on the left side. Another two particular members can sit only on the right side. Find the number of ways in which the crew can be arranged so that four men can sit on each side.

A 864

B 865

C 863

D 1728

**Answer: D**

**Explanation:**

First we arrange the three person on left side and two on right side, it can be done only in 1 way.

Now for the remaining 3 persons, number of ways =  $C_2^3$

Selecting 4 people for each side can be done in =  $4! \times 4!$  ways

=> Total number of ways =  $C_2^3 \times 4! \times 4!$

=  $3 \times 24 \times 24 = 1728$

=> Ans - (D)

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**Question 63**

Three pipes are made of different shapes. The cross-sections of the pipes are an equilateral triangle, a hexagon and a circle. The perimeter of each of these cross-sections is equal. The flow through the pipes is proportional to the area of cross-section. If it takes 8 min for the triangular pipe to fill up the tank, what will be the difference in the times taken by the hexagonal and circular pipes?

A 45 s

B 1 min

C 1.5 min

D 7.9 min

**Answer: B**

**Question 64**

An iron cube of size 10 cm is hammered into a rectangular sheet of thickness 0.5 cm. If the sides of the sheet be in the ratio 1 : 5, then the sides are

A 20 cm, 100 cm

- B 10 cm, 50 cm
- C 40 cm, 200 cm
- D None of the above

**Answer: A**

**Explanation:**

Let sides of sheet be  $x$  and  $5x$  cm and height = 0.5 cm

Volume of cuboid = Volume of cube

$$\Rightarrow lbh = a^3$$

$$\Rightarrow x \times 5x \times 0.5 = (10)^3$$

$$\Rightarrow 5x^2 = 2000$$

$$\Rightarrow x = \sqrt{400} = 20$$

$\therefore$  Sides are **20, 100 cm**

$\Rightarrow$  Ans - (A)

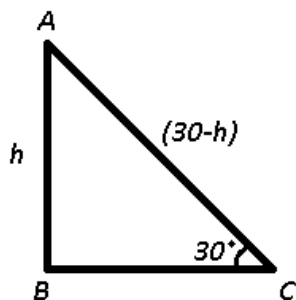
**Question 65**

A portion of a 30 m long tree is broken by a tornado and the top strikes the ground making an angle of  $30^\circ$  with the ground level. The height of the point where the tree is broken is equal to :

- A 10 m
- B  $\frac{30}{\sqrt{3}}$  m
- C  $34\sqrt{3}$  m
- D 60 m

**Answer: A**

**Explanation:**



The height of tree (before it broke) =  $AB + AC = 30$  m. Let  $AB = h$  m

In right  $\triangle ABC$ ,

$$\Rightarrow \sin(30^\circ) = \frac{AB}{AC}$$

$$\Rightarrow \frac{1}{2} = \frac{h}{30-h}$$

$$\Rightarrow 30 - h = 2h$$

$$\Rightarrow h = \frac{30}{3} = 10$$

$\therefore$  Height where the tree broke = **10 m**

$\Rightarrow$  Ans - (A)

## Free Gk Tests

### Question 66

Fresh grapes contain 80 percent water while dry grapes contain 10 percent water. If the weight of dry grapes is 250 kg what was its total weight when it was fresh?

- A 1000 kg
- B 1125 kg
- C 1225 kg
- D 1100 kg

Answer: B

### Explanation:

Quantity of water in 250 kg dry grapes =  $\frac{10}{100} \times 250 = 25$  kg

=> Pulp of grapes = 225 kg

Since, fresh grapes has only 20% pulp, => 20%  $\equiv$  225

=> Total weight = 100%  $\equiv$   $\frac{225}{20} \times 100 = 1125$  kg

=> Ans - (B)

### Question 67

A dealer buys dry fruit at the rate of Rs 100, Rs 80 and Rs 60 per kg. He bought them in the ratio 12 : 15 : 20 by weight. He in total gets 20% profit by selling the first two and at last he finds he has no gain no loss in selling the whole quantity which he had. What was the percentage loss he suffered for the third quantity?

- A 40%
- B 20%
- C 30%
- D 50%

Answer: A

### Explanation:

Let the dealer bought 12, 15 and 20 kg of each type respectively.

Total cost price =  $(12 \times 100) + (15 \times 80) + (20 \times 60) = 1200 + 1200 + 1200 = \text{Rs. } 3600$

Also, total selling price (since there is no profit no gain) = Rs. 3600

Now, Selling price of first two types after 20% profit =  $\frac{120}{100} \times 2400 = \text{Rs. } 2880$

=> Selling price of 3rd type =  $3600 - 2880 = \text{Rs. } 720$

$\therefore$  Loss % =  $\frac{(1200-720)}{1200} \times 100 = 40\%$

=> Ans - (A)

### Question 68

A man sitting in train travelling at the rate of 50 km/h observes that it takes 9 s for a goods train travelling in the opposite direction to pass him. If the goods train is 187.5 m long, find its speed

- A 40 km/h

- B 25 km/h
- C 35 km/h
- D 36 km/h

**Answer: B**

**Explanation:**

Speed of first train =  $50 \times \frac{5}{18} = \frac{125}{9}$  m/s and speed of second train =  $x$  m/s

Relative speed =  $(x + \frac{125}{9})$  m/s

Length of second train = 187.5 m

Using, speed = distance/time

$$\Rightarrow x + \frac{125}{9} = \frac{187.5}{9}$$

$$\Rightarrow x = \frac{62.5}{9}$$

$\therefore$  Speed of goods train =  $\frac{62.5}{9} \times \frac{18}{5} = 25$  km/hr

$\Rightarrow$  Ans - (B)

## Daily Free Topic Test

**Question 69**

Amit Kumar got a 4-digit pass code (which is formed out of the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, 9) of his ATM card from ICICI Bank. But after the 50th day he lost the pass code and also forgot the number. How many maximum number of trials may he have to take to get the right number? 0 can be the beginning of the code number

- A 10!
- B  $10^4$
- C  $9^4$
- D 9!

**Answer: B**

**Explanation:**

Pass code : \_ \_ \_ \_

Now, all these four places can be filled with any of the 10 numbers, since repetition is allowed, and 0 can be the first digit.

Thus, maximum number of attempts =  $10 \times 10 \times 10 \times 10 = (10)^4$

$\Rightarrow$  Ans - (B)

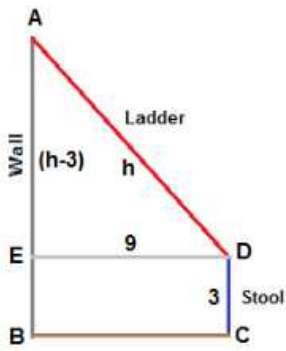
**Question 70**

The length of a ladder is exactly equal to the height of the wall it is leaning against. If the lower end of the ladder is kept on a stool of height 3 m and the stool is kept 9 m away from the wall, the upper end of the ladder coincides with the top of the wall. Then the height of the wall is

- A 15 m
- B 12 m
- C 18 m
- D 11 m

**Answer: A**

Explanation:



Let height of ladder be  $AD = h$  m,  $\Rightarrow AE = (h - 3)$  m and  $ED = 9$  m

In right  $\triangle ADE$ ,

$$\Rightarrow (AD)^2 = (AE)^2 + (ED)^2$$

$$\Rightarrow (h)^2 = (h - 3)^2 + (9)^2$$

$$\Rightarrow h^2 = h^2 - 6h + 9 + 81$$

$$\Rightarrow 6h = 90$$

$$\Rightarrow h = \frac{90}{6} = 15$$

$\therefore$  Length of ladder = Height of wall = 15 m

$\Rightarrow$  Ans - (A)

Question 71

If three equal cubes are placed adjacently in a row, then the ratio of the total surface area of the new cuboid to that of the sum of the surface areas of the three cubes will be

A 5 : 9

B 1 : 3

C 2 : 3

D 7 : 9

Answer: D

Explanation:

Let edge of each cube be  $a = 1$  cm and length, width and height of cuboid be  $l = 3$  cm,  $b = 1$  cm and  $h = 1$  cm

Total surface area of cuboid =  $2(lb + bh + hl)$

$$= 2 \times (3 + 1 + 3) = 14 \text{ cm}^2$$

Total surface area of each cube =  $3 \times 6a^2 = 18 \times (1)^2 = 18 \text{ cm}^2$

$$\therefore \text{Required ratio} = \frac{14}{18} = 7 : 9$$

$\Rightarrow$  Ans - (D)

## MAT Free Solved Previous Papers

Question 72

The Qutab Minar casts a shadow 150 m long at the same time when the Vikas Minar casts a shadow 120 m long on the ground. If the height of the Vikas Minar is 80 m, find the height of the Qutab Minar.

- A 100 m
- B 180 m
- C 150 m
- D 120 m

**Answer: A**

**Explanation:**

Ratio of their heights = Ratio of length of shadow (since angle will be same)

Let height of Qutab Minar =  $h$  m

$$\Rightarrow \frac{h}{80} = \frac{150}{120}$$

$$\Rightarrow h = \frac{150}{1.5} = 100 \text{ m}$$

$\Rightarrow$  Ans - (A)

**Question 73**

Due to global recession Starting in January, Ram's monthly salary of Rs 80,000 was cut by 10%. The monthly expenses which were Rs 6000, increased at the rate of 5% per month. Since which month will he have no savings if the recession lasted for a year?

- A April
- B March
- C May
- D June

**Answer: A**

**Explanation:**

Ram's salary for each month =  $\frac{90}{100} \times 8000 = \text{Rs. } 7200$

Expenses were increased at 5% each month

Month	Salary	Expenses	Saving
January	7200	6000+ 5% of 6000 = 6300	7200-6300=900
February	7200	6300+5% of 6300= 6615	7200-6615=585
March	7200	6615+5% of 6615= 6945.75	7200-6945.75=254.25
April	7200	6945.75+ 5% of 6945.75 = 7293.0375	Expenses are more than salary

Thus, from the month of April, he wont have any savings.

$\Rightarrow$  Ans - (A)

**Question 74**

An oil refinery takes 100 L of crude oil as input and after refining for 1 hour gives certain amount of output oil X litres. This can be sold in the market at a profit of Rs 30/L. If this oil is further refined for  $\frac{1}{2}$  h it gives oil Y litre. This can be sold at a profit of Rs. 50/L. Output and input ratio at both the stages is 90%. The maximum amount that can't be earned from 1000 L of crude input is

- A Rs 30,000
- B Rs 27,000

C Rs 40,000

D Rs 40,500

Answer: D

**Explanation:**

Case 1 : When we refine oil for 1 hour

Input = 1000 L

$$\Rightarrow \text{Output} = \frac{90}{100} \times 1000 = 900 \text{ L}$$

$$\text{Profit} = 30 \times 900 = \text{Rs. } 27,000$$

Case 2 : When we refine oil for 1/2 hour

Input = 900 L

$$\Rightarrow \text{Output} = \frac{90}{100} \times 900 = 810 \text{ L}$$

$$\text{Profit} = 50 \times 810 = \text{Rs. } 40,500$$

$\therefore$  Clearly, maximum profit earned is **Rs. 40,500**

$\Rightarrow$  Ans - (D)

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**Question 75**

The radius of a cylindrical cistern is 10 m and its height is 15 m. Initially the cistern is empty. We start filling the cistern with water through a pipe whose diameter is 50 cm. Water is coming out of the pipe with a velocity of 5 m/s. How many minutes will it take in filling the cistern with water?

A 20

B 70

C 60

D 80

Answer: D

**Explanation:**

Radius of cistern  $R = 10\text{m}$  and height =  $H = 15\text{ m}$

Radius of cylindrical pipe  $r = 0.25\text{m}$  and height =  $h = 5\text{ m}$  (for 1 sec)

$$\Rightarrow \text{Volume of cylindrical cistern} = \pi r^2 h$$

$$\therefore \text{Time taken to fill the cistern (in minutes)} = \frac{\pi(10)^2 \times 15}{\pi \times (0.25)^2 \times 5} \times \frac{1}{60}$$

$$= \frac{100 \times 10000}{625 \times 5 \times 4}$$

$$= 5 \times 16 = 80 \text{ minutes}$$

$\Rightarrow$  Ans - (D)

**Question 76**

If  $m$  and  $n$  are natural number such that  $2^m - 2^n = 960$ , what is the value of  $m$ ?

A 10

B 12



C 16

D Cannot determined

Answer: A

Explanation:

Expression :  $2^m - 2^n = 960$  -----(i)

$\Rightarrow 2^m > 960$

$\Rightarrow m \geq 10$

If,  $m = 10$

Substituting in equation (i), we get :  $1024 - 2^n = 960$

$\Rightarrow 2^n = 64 = 2^6$

$\Rightarrow n = 6$

Since, both are natural numbers,  $\Rightarrow m = 10$

$\Rightarrow$  Ans - (A)

Question 77

If an angle of a triangle remain unchanged but each of its two including sides is doubled then by what factor does the area get multiplied?

A 2

B 3

C 4

D 5

Answer: C

Explanation:

Let the 2 sides be  $a = b = 2$  cm each, and the angle between them be  $\theta$

Now, area of triangle =  $\frac{1}{2}ab\sin\theta$

$\Rightarrow A = \frac{1}{2} \times 2 \times 2 \times \sin\theta = 2\sin\theta \text{ cm}^2$

When the sides are doubled,  $\Rightarrow a' = b' = 4$  cm

$\Rightarrow A' = \frac{1}{2} \times 4 \times 4 \times \sin\theta = 8\sin\theta \text{ cm}^2$

$\therefore \frac{A'}{A} = 4$

$\Rightarrow$  Ans - (C)

Free Gk Tests

Question 78

A number when divided by 765 leaves a remainder 42. What will be the remainder if the number is divided by 17?

A 8

B 7

C 6

D 5

Answer: A

**Explanation:**

The number when divided by 765 leaves remainder 42,  $\Rightarrow$  Number =  $N = 765k + 42$ , where  $k$  is a whole number

Let  $k = 0$ ,  $\Rightarrow N = 42$

Now, when 42 is divided by 17, remainder =  $42 \% 17 = 8$

$\Rightarrow$  Ans - (A)

**Question 79**

If 11, 109, 999 is divided by 1111, then what is the remainder ?

A 1098

B 11888

C 1010

D 1110

Answer: D

**Explanation:**

If we add 1 to our dividend, it becomes =  $11,109,999 + 1 = 11,110,000$  which is clearly a multiple of 1111 ( $\because 1111 \times 10000 = 11110000$ )

Now, since we added 1 to the number, we need to divide 1 from 1111 to get the remainder.

Thus, remainder =  $1111 - 1 = 1110$

$\Rightarrow$  Ans - (D)

**Question 80**

A mixture (40 L) contains coniac and water in the ratio 3 : 1. To make the ratio 5 : 2. How much additional amount of water is required?

A 5 L

B 1 L

C 3 L

D 2 L

Answer: D

**Explanation:**

Quantity of coniac in the mixture = 30 l and quantity of water = 10 l

Let  $x$  l of water is added.

$$\Rightarrow \frac{30}{10+x} = \frac{5}{2}$$

$$\Rightarrow 12 = 10 + x$$

$$\Rightarrow x = 2$$

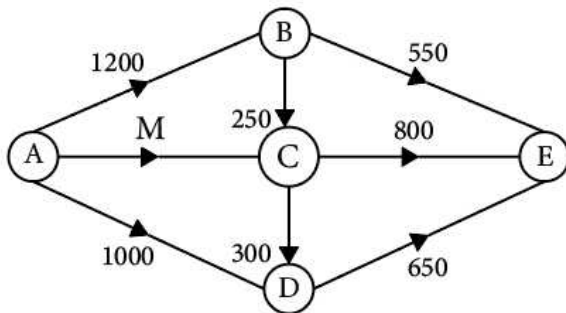
$\therefore$  2 l of additional water is required.

$\Rightarrow$  Ans - (D)

## Data Analysis & Sufficiency

### Instructions

Answer these based on the figure which represents the flow of natural gas through pipelines across major cities A, B, C, D and (in suitable units). Assume, that supply equals demand.



### Question 81

What is the number of units demanded in B?

- A 400
- B 350
- C 450
- D 500

Answer: A

### Explanation:

Number of inputs at B = 1200

Number of outputs from B =  $550 + 250 = 800$

Now, output - input = demand

=> Number of units demanded in B =  $1200 - 800 = 400$

=> Ans - (A)

## MAT Free Solved Previous Papers

### Question 82

If the number of units demanded in C is 225, what is the value of M?

- A 875
- B 1075
- C 775
- D 850

Answer: B

### Explanation:

Number of inputs at C =  $M + 250$

Total supply from C (outputs) =  $800 + 300 = 1100$

Number of units demanded at C = 225 units

Now, output - input = demand

$$\Rightarrow 1100 - M - 250 = 225$$

$$\Rightarrow M = 1075$$

$\Rightarrow$  Ans - (B)

**Question 83**

If the total demand in E is 80% of the demand in A, what is the demand in A?

- A 2400
- B 2500
- C 4500
- D None of these

**Answer: B**

**Explanation:**

Total demand in E = Total input in E =  $550 + 800 + 650 = 2000$

Now, E's demand is 80% of A,

$$\Rightarrow \text{Total demand in A} = 2000 \times \frac{100}{80} = 2500$$

$\Rightarrow$  Ans - (B)

**Instructions**

Answer these questions based on the information provided in the tables.

**Sector Composition of India's Exports (in percentage)**

Sector	1998-99	1999-2000	2000-01	2001-02	2002-03
Agricultural and Allied	17.9	18.2	18.2	13.4	12.1
Ores and Minerals	5.2	1.8	2.7	2.8	3.6
Petroleum and Crude	2.3	1.4	1.4	4.9	4.5
Manufactured Goods	73.6	77.6	74.7	76.1	77.4
Other Products	1	1	1.2	2.8	2.4

**Products wise Composition of Exports of the Manufactured Goods Sector (in Percentage)**

Product	1998-99	1999-2000	2000-01	2001-02	2002-03
Leather Products	7.1	5.5	5	4.4	3.8
Chemicals	8.8	7.8	9.2	9.8	10.1
Engineering Goods	12.5	13.6	13.2	15.7	16.6
Textiles	14	13.7	13.6	11.8	11.8
Ready made Garments	12.3	11.6	13.1	11.4	10.4
Germs and Jewellery	15.3	16.6	17.8	16.8	18.3
Others	30	31.2	28.1	30.1	29
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Question 84**

By what percentage has the exports of petroleum and crude in India increased from 1998-1999 to 2002-2003?

- A 95.65%
- B 75.85%
- C 81.45%
- D Data inadequate

**Answer: A**

**Explanation:**

Exports of petroleum and crude in 1998-99 = 2.3%

Exports of petroleum and crude in 2002-03 = 4.5%

$$\Rightarrow \text{Percentage increase} = \frac{(4.5-2.3)}{2.3} \times 100 \approx 95.65\%$$

$\Rightarrow$  Ans - (A)

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**Question 85**

In 2000-2001 if \$ 224.10 million worth of leather goods were exported from India then the total exports of India were (in \$ million) approximately

- A 4000
- B 6000
- C 5000
- D 8000

**Answer: B**

**Explanation:**

Exports of leather products in 2000-2001 = 224.10 million

$$\Rightarrow \text{India's exports in 2000-2001} = 224.10 \times \frac{100}{5} \times \frac{100}{74.7}$$

$$= 3 \times 20 \times 100 = 6000 \text{ million dollars}$$

$\Rightarrow$  Ans - (B)

**Question 86**

If the exports of gems and jewellery in 1999-2000 were approximately \$ 300 million then what is the value (in millions) of the exports of ores and minerals in 2002-2003, given that the value of India's exports has increased by 150% from 1999-2000 to 2002-2003?

- A \$ 184
- B \$ 162
- C \$ 179
- D None of these

**Answer: D**

**Explanation:**

Exports of gems and jewellery in 1999-2000 = 300 million

$$\Rightarrow \text{India's exports in 1999-2000} = 300 \times \frac{100}{16.6} \times \frac{100}{77.6} \approx 2330 \text{ million}$$

$$\text{After 150\% increase, India's exports in 2002-03} = 1.5 \times 2330 = 3495 \text{ million}$$

$$\therefore \text{Value (in millions) of the exports of ores and minerals in 2002-2003} = \frac{3.6}{100} \times 3495 \approx 125 \text{ million}$$

$\Rightarrow$  Ans - (D)

**Question 87**

If India's exports increased by 20% from 1998-1999 to 2002-03, then find the approximate percentage increase in the exports of the engineering goods from 1998-1999 to 2002-2003.

- A 68%
- B 57%
- C 78%
- D Cannot be determined

Answer: A

**Explanation:**

Let India's exports in 1998-99 be Rs. 100 and thus in 2002-03 = Rs. 120

$$\text{Thus, Engineering goods in 1998-99} = \frac{12.5}{100} \times \frac{73.6}{100} \times 100 = \frac{73.6}{8} = 9.2$$

$$\text{Engineering goods in 2002-03} = \frac{16.6}{100} \times \frac{77.4}{100} \times 120 = \frac{73.6}{8} = 15.4$$

$$\therefore \text{Percentage increase} = \frac{(15.4-9.2)}{9.2} \times 100 \approx 68\%$$

=> Ans - (A)

## Free Gk Tests

**Instructions**

Study the table below to answer these questions:

**Production of Plastic Material**

Months	Polypropylene (000 tonnes)		Polyethylene (000 tonnes)		Nylon (000 tonnes)	
	2003-04	2004-05	2003-04	2004-05	2003-04	2004-05
March	17.6	20.8	104	40	3150	2900
April	16.4	20.6	100	88	3050	2850
May	16	21.4	80	96	3000	2900
June	15.4	19.2	88	80	2520	2800
July	16	19.2	90	84	2600	2700
August	16.6	21.4	94	80	2650	2750
September	16.4	20.8	98	84	2500	2650
October	17.8	23	100	80	2200	3000
November	16.4	22.6	104	92	2000	2950
December	17.6	21.8	108	88	2250	3000
January	20	20	96	100	2750	2350
February	19.8	17.8	20	96	2600	2250
March	21	-	40	96	2900	-

**Question 88**

In 2003-04, the ratio of the difference between the maximum and the minimum production of polyethylene, to the difference between the maximum and minimum production of polypropylene, is nearly

- A 15
- B 14
- C 16
- D 18

Answer: C

**Explanation:**

Difference between the maximum and the minimum production of polyethylene in 2003-04 =  $108 - 20 = 88$

Difference between the maximum and the minimum production of polypropylene in 2003-04 =  $21 - 15.4 = 5.6$

=> Required ratio =  $\frac{88}{5.6} \approx 16\%$

=> Ans - (C)

#### Question 89

The ratio of the maximum production of polyethylene in 2004-05 to the minimum production of polyethylene in 2003-04 is

- A 5
- B 4.8
- C 5.4
- D 4.2

Answer: A

#### Explanation:

Maximum production of polyethylene in 2004-05 = 100 (January)

Minimum production of polyethylene in 2003-04 = 20 (February)

=> Required ratio =  $\frac{100}{20} = 5$

=> Ans - (A)

#### Question 90

The maximum number of times the production in 2003-04 equals the production in 2004-05 is for which product?

- A Polyethylene
- B Polypropylene
- C Nylon
- D None of these

Answer: B

#### Explanation:

Production of Polyethylene and Nylon has never been equal in 2003-04 and 2004-05, but Polypropylene's production was equal once in 2003-04 and 2004-05 (in January).

=> Ans - (B)

## Daily Free Topic Test

#### Question 91

For polyethylene, the production in 2003-05 is, greater than the production in 2004-05 for how many months?

- A 5
- B 8
- C 10
- D 9

Answer: D

**Explanation:**

For polyethylene, the production in 2003-04 is greater than the production in 2004-05 for **9 months**. March, April, June, July, August, September, October, November, December.

=> Ans - (D)

**Question 92**

The difference between the minimum production of polypropylene in 2004-05 and the minimum production of difference in July's production of polyethylene of the two years?

- A 2 times
- B 3 times
- C equal
- D 0.4 times

**Answer:** D

**Instructions**

Refer the following table to answer these questions.

**Sectorwise Installed Capacity in MW**

Year	Thermal	Hydel	Nuclear	Total
1990	7900	6390	420	14710
1991	8200	6610	420	15230
1992	8900	6780	420	16100
1993	9100	6965	640	16705
1994	10150	7530	640	18320
1995	11000	8500	640	20140
1996	12000	9200	640	21840
1997	13000	9880	640	23520
1998	15200	10200	800	26200
1999	16700	10450	800	27950
2000	19000	11000	800	30800

**Question 93**

The two years when the capacities were augmented in all the sectors are

- A 1993 and 1998
- B 1990 and 1991
- C 1993 and 1996
- D 1990 and 2000

**Answer:** A

**Explanation:**

The two years in which the capacities were augmented (increased) in all the sectors are **1993 and 1998**, because in these years, there is an increment in all three of them.

=> Ans - (A)

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**Question 94**

The percentage increase in hydel capacity over that of the previous year was maximum in



- A 1997
- B 1991
- C 1999
- D 1995

**Answer: D**

**Explanation:**

The percentage increase in hydel capacity over that of the previous year in :

$$(A) : 1997 = \frac{9880-9200}{9200} \times 100 = 7.5\%$$

$$(B) : 1991 = \frac{6610-6390}{6390} \times 100 = 3.5\%$$

$$(C) : 1999 = \frac{10450-10200}{10200} \times 100 = 2.5\%$$

$$(D) : 1995 = \frac{8500-7530}{7530} \times 100 = 13\% \quad \text{[MAX]}$$

=> Ans - (D)

**Question 95**

In 2000, the percentage share of nuclear power in the total power capacity installed was approximately?

- A 10.0
- B 2.59
- C 5.42
- D 1.11

**Answer: B**

**Explanation:**

In 2000, the percentage share of nuclear power in the total power capacity installed

$$= \frac{800}{30800} \times 100$$

(Clearly, its between 2 and 3%)  $\approx 2.6\%$

=> Ans - (B)

**Question 96**

If the total power generated in thermal units be 40% of the installed capacity, in hydel units be 50% of the installed capacity and in nuclear be 90% of the installed capacity, the total power generation in 1998 would be

- A 19835 MW
- B 11900 MW
- C 5015 MW
- D 22100 MW

**Answer: B**

**Explanation:**

The total power generation in 1998

$$= \left(\frac{40}{100} \times 15200\right) + \left(\frac{50}{100} \times 10200\right) + \left(\frac{90}{100} \times 800\right)$$

$$= 6080 + 5100 + 720 = 11900 \text{ MW}$$

=> Ans - (B)

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### Question 97

In 1990, the percentage share of thermal in total installed capacity was approximately

- A 45
- B 50
- C 26
- D 54

**Answer: D**

#### Explanation:

In 1990, the percentage share of thermal in total installed capacity

$$= \frac{7900}{14710} \times 100$$

(which is clearly greater than 50%)  $\approx 54\%$

=> Ans - (D)

### Question 98

The growth in the installed thermal capacity between 1991 and 1999 was approximately.

- A 51%
- B 130%
- C 92%
- D 83%

**Answer: D**

#### Instructions

For the following questions answer them individually

### Question 99

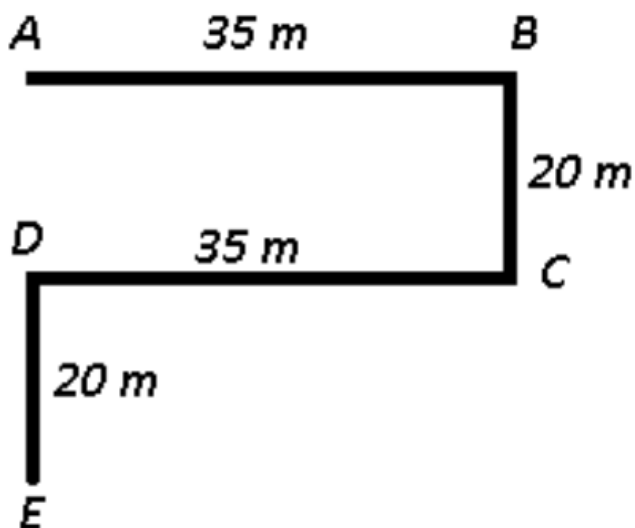
From a point, Rajneesh started walking towards east and walked 35 m. He then turned towards his right and walked 20 m and he again turned right and walked 35 m. Finally he turned to his left and walked 20 m and he reached his destination. Now, how far is he from his starting point?

- A 55 m
- B 50 m
- C 20 m
- D 40 m

**Answer: D**

#### Explanation:

Let Rajneesh started walking from point A towards east and walked 35 m to reach B. Then he turned towards his right and walked 20 m southwards to reach C and he again turned right and walked 35 m towards west to reach D. Finally he turned to his left and walked 20 m and he reached his destination at point E.



Distance from starting point = AE = 20 + 20 = 40 m

=> Ans - (D)

### Free Gk Tests

#### Question 100

Rama remembers that she met her brother on Saturday, which was after the 20<sup>th</sup> day of a particular month. If the 1<sup>st</sup> day of that month was Tuesday, then on which date did Rama meet her brother?

- A 24<sup>th</sup>
- B 23<sup>rd</sup>
- C 25<sup>th</sup>
- D None of these

Answer: D

#### Explanation:

1st day of the month = Tuesday

Then, 5th of that month will be Saturday

Thus, Saturday will fall on = 5, 12, 19, 26

=> Ans - (D)

#### Question 101

Introducing Rajesh, Neha said, his brother's father is the only son of my grandfather. How is Neha related to Rajesh?

- A Daughter
- B Sister
- C Mother
- D Niece

Answer: B

Question 102

A directional post is erected on a crossing. In an accident, it was turned in such a way that the arrow which was first showing east is now showing south. A passer-by went in a wrong direction thinking it is west. In which direction is he actually travelling now?

- A North
- B South
- C East
- D West

Answer: A

Daily Free Topic Test

Question 103

Ram's age was square of number last year and it will be cube of a number next year. How long must he wait before his age is again the cube of a number?

- A 10 years
- B 39 years
- C 38 years
- D 64 years

Answer: C

Question 104

An office has as many four-legged chairs and as many four-legged tables as workers, and as many three-legged stools as four-legged almirahs. If the number of stools be one more than the number of workers and the total number of legs be 585, the number of workers in the office are?

- A 17
- B 34
- C 16
- D Cannot be determined

Answer: B

Explanation:

Number of workers = Number of 4 legged chairs = Number of 4 legged tables =  $x$

Number of 3 legged stools = Number of 4 legged almirahs =  $y$

According to ques,  $\Rightarrow y = x + 1$  -----(i)

Total legs =  $(2x + 4x + 4x) + (3y + 4y) = 585$

$\Rightarrow 10x + 7y = 585$

Substituting value from equation (i),  $\Rightarrow 10x + 7(x + 1) = 585$

$\Rightarrow 17x = 585 - 7 = 578$

$\Rightarrow x = \frac{578}{17} = 34$

$\Rightarrow$  Ans - (B)

Question 105

A, B, C and D play a game of cards. A says to B, 'If give you 8 cards, you will have as many as C has and I shall have 3 less than what C has. Also if I take 6 cards from C, I shall have twice as many as D has'. If B and D together have 50 cards, how many cards has A got?

- A 27
- B 23
- C 37
- D 40

Answer: D

Explanation:

Let number of cards with A be  $x$ , with B =  $y$ , with C =  $z$  and with D =  $(50 - y)$

According to ques,

$$\Rightarrow y + 8 = z \text{ and } x - 8 = z - 3$$

Comparing above equations,  $\Rightarrow y + 8 = x - 5$

$$\Rightarrow x - y = 13 \text{ -----(i)}$$

$$\text{Also, } x + 6 = 2(50 - y)$$

$$\Rightarrow x + 6 = 100 - 2y$$

$$\Rightarrow x + 2y = 94 \text{ -----(ii)}$$

Subtracting equation (i) from (ii),  $\Rightarrow 3y = 81$

$$\Rightarrow y = \frac{81}{3} = 27$$

Substituting it in equation (i), we get :  $x = 13 + 27 = 40$

$\Rightarrow$  Ans - (D)

**MAT Free Solved Previous Papers**

Question 106

After a get-together every person present shakes the hand of every other person. If there were 105 hands shakes in all, how many persons were present in the party?

- A 14
- B 13
- C 15
- D 16

Answer: C

Explanation:

Total number of handshakes = 105, let number of persons be  $x$

$$\Rightarrow \text{Number of handshakes} = \frac{x(x-1)}{2} = 105$$

$$\Rightarrow x^2 - x - 210 = 0$$

$$\Rightarrow (x - 15)(x + 14) = 0$$

$$\Rightarrow x = 15, -14$$

$\therefore$  -14 is not possible, hence number of persons = 15

=> Ans - (C)

**Question 107**

In a queue I am the last person while my friend is seventh from the front. If the person exactly between me and my friend is on the 23rd position from the front, what is my position in the queue ?

- A 37
- B 36
- C 38
- D 39

**Answer: D**

**Explanation:**

Let there are  $n$  persons in queue. Then, person at the middle will be :

$$\Rightarrow \frac{n+7}{2} = 23$$

$$\Rightarrow n + 7 = 46$$

$$\Rightarrow n = 46 - 7 = 39$$

Thus, my position is **39**.

=> Ans - (D)

**Question 108**

A cube is to be coloured in such a way as to avoid the same colour on adjacent surface. What is the minimum number of colours you will require?

- A Four
- B Three
- C Six
- D Nine

**Answer: B**

**Explanation:**

Since no two adjacent faces can have same color, any pair of two opposite faces can have same color.

$$\text{Hence, minimum number of colours required} = \frac{6}{2} = 3$$

=> Ans - (B)

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**Question 109**

There are eight poets A, B, C, D, E, F, G, and H. A, B, C and D are medieval poets whereas E, F, G and H are modern poets. Questions on modern poets and medieval poets are set in the question paper every alternate year. Among the modern poets, question-setters who like E also like F and those who like G also like H. The question-setter has written a book on F and so he does not like to ask any question on F. Last year there was a question on A. On which poet will be the probable question this year?

- A F
- B E

C D

D C

Answer: B

**Explanation:**

Since last year a question was asked on A, who is a medieval poet, this year a question will be asked on a modern poet which means E, F, G or H. Thus, last two options are eliminated.

Now the examiner is not likely to ask question on F because he has written an article on him. So he will ask the question on E.

=> Ans - (B)

**Question 110**

There are five books A, B, C, D and E. Book C lies above D, Book E is below A; D is above A; B is below E. Which is at the bottom ?

A B

B E

C A

D C

Answer: A

**Explanation:**

Book C and D lies above A, while E lies below A. Also, B lies below E. Order is :

C
D
A
E
B

Thus, B is at the bottom.

=> Ans - (A)

**Question 111**

A one-rupee coin is placed on plain paper. How many coins of the same size can be placed round it so that each one touches the central and adjacent coins?

A 3

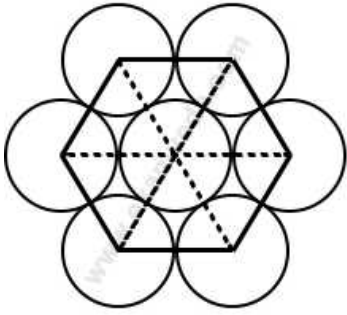
B 4

C 7

D 6

Answer: D

**Explanation:**



When 3 congruent circles touch each other externally, the triangle formed with their centers is an equilateral triangle. Hence when a circle is surrounded by identical circles, centers of two consecutive circles make an angle of  $60^\circ$  with the central circle. Thus, six identical circles surround a circle of equal radius.

=> Ans - (D)

## Free Gk Tests

### Instructions

The following table refers to hotel construction projects. The cost of project increased at the rate of 10% per annum; if completed beyond 1997.

**Hotels in Mumbai**

Project	No.of Rooms	Estimated Cost (Rs in crores)	Year of Completion	Company
Windsor Manor	600	275	1999	IHCL
Leela Hotels	310	235	1999	Leela Hotels
Mumbai Heights	250	250	1998	Bombay Hotels
Royal Holidays	536	225	1998	Lokhand-wala Group
Mgjestic Holidays	500	250	1999	Raheja Group
Supremo Hotel	300	300	1999	ITC
Hyott Regency	500	250	2000	Asian Hotels

### Question 112

Which of the following had the least cost per room ?

- A Raheja group
- B Lokhandwala group
- C IHCL
- D ITC

Answer: B

### Explanation:

Cost per room :

(A) : Raheja Group :  $\frac{250}{500} = 0.5$

(B) : Lokhandwala Group :  $\frac{225}{536} = 0.41$  [MIN]

(C) : IHCL :  $\frac{275}{600} = 0.45$

(D) : ITC :  $\frac{300}{300} = 1$

=> Ans - (B)

### Question 113

Which of the following has the maximum number of rooms per crore of rupees?



- A Raheja Group
- B IHCL
- C Lokhandwala Group
- D ITC

**Answer: C**

**Explanation:**

Max number of rooms per crore of rupees :

(A) : Raheja Group :  $\frac{500}{250} = 2$

(B) : IHCL :  $\frac{600}{275} = 2.18$

(C) : Lokhandwala Group :  $\frac{536}{225} = 2.38$  [MAX]

(D) : ITC :  $\frac{300}{300} = 1$

=> Ans - (C)

**Question 114**

**What is the cost incurred for projects completed in 1998?**

- A Rs 500 crore
- B Rs 475 crore
- C Rs 522.5 crore
- D Rs 502.5 crore

**Answer: C**

**Explanation:**

Cost incurred for projects completed in 1998

$= (250 + 225) \times (1.1) = Rs. 522.5$  crore

=> Ans - (C)

### Daily Free Topic Test

**Question 115**

**What is the cost incurred for projects completed in 1999?**

- A Rs 1270 crore
- B Rs 1282.6 crore
- C Rs 1805.1 crore
- D Rs 1535 crore

**Answer: B**

**Explanation:**

Cost incurred for projects completed in 1999

$= (275 + 235 + 250 + 300) \times (1.1)^2 = Rs. 1282.6$  crore

=> Ans - (B)

Question 116

What is the approximate cost incurred for projects completed by 2000?

- A Rs 2140 crore
- B Rs 1785 crore
- C Rs 2320 crore
- D None of these

Answer: A

Explanation:

For projects completed in 2000, cost = Rs. 250 crore

Total cost (with tax) =  $250 \times (1.1)^3 = Rs. 332.75$  crore

Total costs of projects completed in 1998 =  $(250 + 225) \times (1.1) = Rs. 522.5$  crore

Total costs of projects completed in 1999 =  $(275 + 235 + 250 + 300) \times (1.1)^2 = Rs. 1282.6$  crore

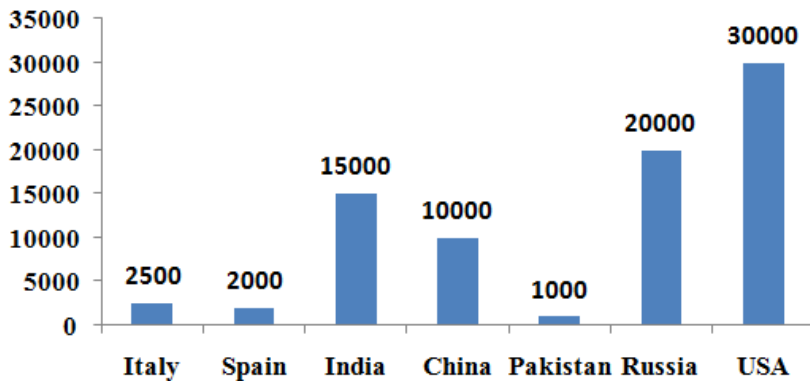
∴ Total cost =  $332.75 + 522.5 + 1282.6 \approx 2140$  crore

=> Ans - (A)

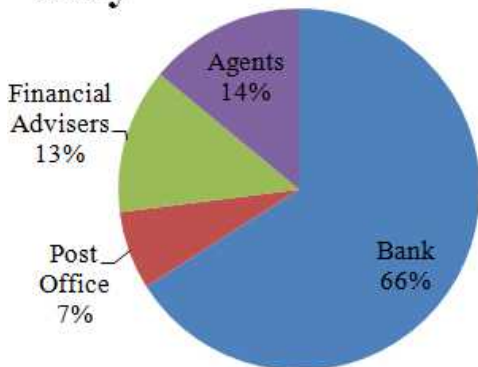
Instructions

These questions are based on the Pie charts and the bar graph given below.

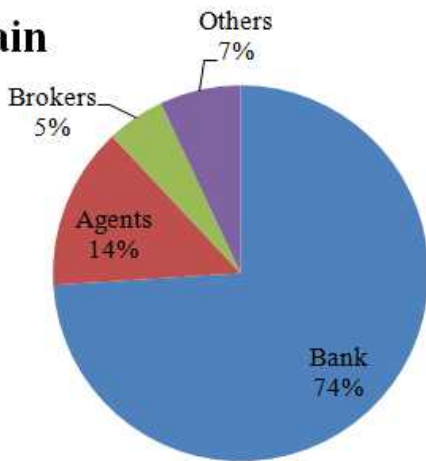
Sale of Life Insurance Policies in 2002 (in million dollars)



Italy



## Spain



### Question 117

By what amount is the life insurance sold in Italy through agents more/less than the life insurance sold in Spain through brokers and agents?

- A More by \$ 30 million
- B Less by \$ 10 million
- C Less by \$ 30 million
- D More by \$ 20 million

Answer: C

#### Explanation:

Life insurance sold in Italy through agents (in million dollars) =  $\frac{14}{100} \times 2500 = 350$

Life insurance sold in Spain through brokers and agents (in million dollars) =  $\frac{(14+5)}{100} \times 2000 = 380$

Thus, life insurance sold in Italy through agents is **less by \$ 30 million** than that of sold in Spain by brokers and agents.

=> Ans - (C)

## MAT Free Solved Previous Papers

### Question 118

If it is known that 12.5% of the total life insurance sold in the countries is listed for term insurance, then what is the approximate value of non-term insurance sold in these countries for the year 2002?

- A \$ 6480 million
- B \$ 10060 million
- C \$ 70400 million
- D Data insufficient

Answer: C

#### Explanation:

Total sales of the countries (in million dollars)

$$= 2,500 + 2,000 + 15,000 + 10,000 + 1,000 + 20,000 + 30,000 = 80,500$$

$$\text{Approx value of non term insurance} = \frac{87.5}{100} \times 80,500$$

$$= \frac{7}{8} \times 80500 = 70400 \text{ million dollars}$$

=> Ans - (C)

Question 119

The split-up of sales of life insurance by distribution channels for India in 2002 is the same as that of Spain. If the insurance agents in India are paid a commission of 0.5% of their sales, then what is the amount of commission earned by them?

- A \$ 9.75 million
- B \$ 9.5 million
- C \$ 10.5 million
- D \$ 13.25 million

Answer: C

Explanation:

Total sales of India in 2002 (in million dollars) = 15000

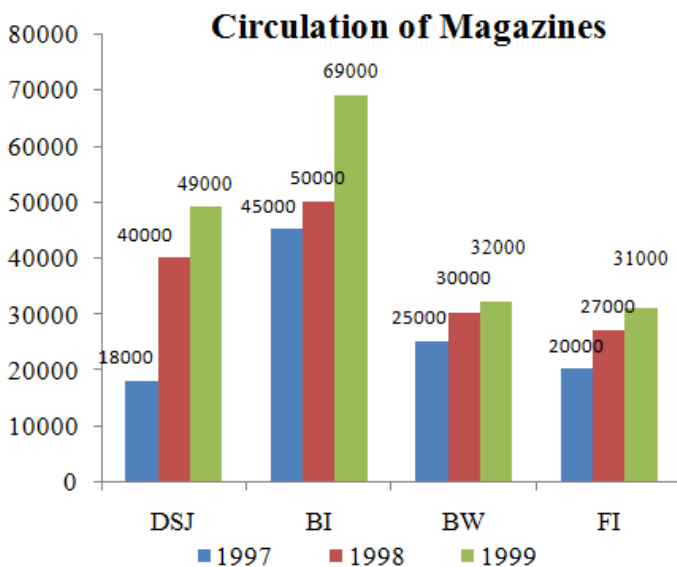
Sales of commission agents =  $\frac{14}{100} \times 15000 = 2100$  million dollars

=> Commission earned (in million dollars) =  $\frac{0.5}{100} \times 2100 = 10.5$  million dollars

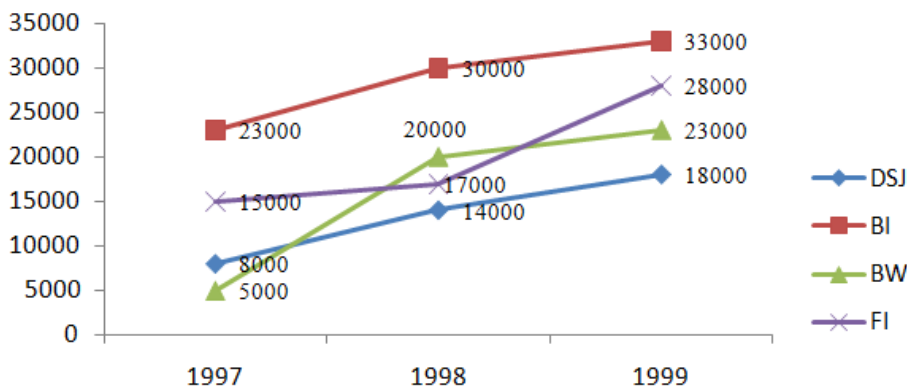
=> Ans - (C)

Instructions

Study the following graphs to answer these questions.



### Advertisement Tariff Per Colour Page(in Rs.)



DSJ : Dalal Street Journal, BI : Business India, BW : Business World, FI : Fortune India

Question 120

The total circulation figure for the four magazines together in 1998 was approximately

- A 181,000
- B 108,000
- C 157,000
- D 140,000

Answer: E

**Explanation:**

Total circulation of the four magazines in 1998

$$= (40 + 50 + 30 + 27) \times 1000 = 147,000$$

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**Question 121**

During the years 1997-99, the magazine that has shown maximum percentage growth in circulation has been

- A Dalal Street Journal
- B Business India
- C Business World
- D Fortune India

Answer: A

**Explanation:**

Clearly, growth in circulation of magazines in DSJ is from 18000 to 49000, which is more than double, and for other magazines, it is less than double, hence percentage growth is maximum in DSJ.

=> Ans - (A)

**Question 122**

In 1999, if Fortune India were to charge the same rate to its advertisers as Dalal Street Journal was charging a year ago, their cost of advertisement per thousand copies in fortune India would

- A increase by Rs 140
- B decrease by 50%
- C decrease by Rs 400
- D increase by 25%

Answer: B

**Explanation:**

Advertisement tariff for FI in 1999 = Rs. 28000

Advertisement tariff for DSJ in 1998 = Rs. 14000

$$\Rightarrow \text{Decrease in their cost} = \frac{28000 - 14000}{28000} \times 100 = 50\%$$

=> Ans - (B)

**Question 123**

In 1998, the advertisement cost for colour page per thousand copies was the lowest for

- A Dalal Street Journal
- B Business India
- C Business World
- D Fortune India

**Answer: A**

**Explanation:**

Advertisement cost for colour page per thousand copies in 1998 for :

$$DSJ = \frac{14,000 \times 1000}{40,000} = Rs. 350 \quad \text{[MIN]}$$

$$BI = \frac{30,000 \times 1000}{50,000} = Rs. 600$$

$$BW = \frac{20,000 \times 1000}{30,000} = Rs. 666$$

$$FI = \frac{17,000 \times 1000}{27,000} = Rs. 630$$

=> Ans - (A)

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**Question 124**

The advertisement cost of colour page per thousand copies for Business World has, from 1997 to 1998

- A decreased by Rs 200
- B remained the same
- C increased by Rs 466
- D increased by Rs 200

**Answer: C**

**Explanation:**

$$\text{Advertising Cost per 1000 copies of Business World in 1997} = \frac{5000 \times 1000}{25000} = Rs. 200$$

$$\text{Advertising Cost per 1000 copies of Business World in 1998} = \frac{20,000 \times 1000}{30000} = Rs. 666$$

=> The cost increased by =  $666 - 200 = Rs. 466$

=> Ans - (C)

**Instructions**

Each question consists of two quantities, one in **Column A** and one in **Column B**. Compare the two quantities and choose answer option as

**Question 125**

Column A	Column B
The number of posts needed for a fence 144 feet long and posts are placed 12 feet apart	12 Posts

- A if the quantity in column B is greater

- B if the quantity in column A is greater
- C if the two quantities are equal
- D if the relationship cannot be determined from the information given

**Answer: B**

**Explanation:**

Column A : Number of posts needed =  $\frac{144}{12} + 1 = 13$  posts

Column B : 12 posts

Quantity in column A is bigger.

=> Ans - (B)

**Question 126**

Column A	Column B
Time elapsed from 2 : 55 P.M. to 3:15 P.M. on the same afternoon	1/3 hours

- A if the quantity in column B is greater
- B if the quantity in column A is greater
- C if the two quantities are equal
- D if the relationship cannot be determined from the information given

**Answer: C**

**Explanation:**

Column A : Time elapsed from 2:55 pm to 3:15 pm = 20 minutes

Column B :  $\frac{1}{3}$  hours = 20 minutes

Both quantities are equal.

=> Ans - (C)

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**Question 127**

Column A	Column B
$\frac{1}{3}$ of 8	$66\frac{2}{3}\%$ of 4

- A if the quantity in column B is greater
- B if the quantity in column A is greater
- C if the two quantities are equal
- D if the relationship cannot be determined from the information given

**Answer: C**

**Explanation:**

Column A :  $\frac{1}{3} \times 8 = \frac{8}{3}$

Column B :  $66\frac{2}{3}\%$  of 4

$$= \frac{200}{3} \times \frac{1}{100} \times 4 = \frac{8}{3}$$

Both quantities are equal.

=> Ans - (C)

#### Question 128

Column A

Column B

The average of  $\sqrt{0.49}$ ,  $\frac{3}{4}$  and 0.8

75%

- A if the quantity in column B is greater
- B if the quantity in column A is greater
- C if the two quantities are equal
- D if the relationship cannot be determined from the information given

Answer: C

#### Explanation:

Column A : Average of 0.7, 0.75, 0.8

$$= \frac{0.7+0.75+0.8}{3} = 0.75 = 75\%$$

Column B : 75%

Both quantities are equal.

=> Ans - (C)

## MAT Free Solved Previous Papers Intelligence & Critical Reasoning

#### Instructions

Read the following information to mean these answers.

Six books are kept one on top of the other. The History book is Just above Accountancy. The Maths books is between Punjabi and Urdu. English is between History and Punjabi.

#### Question 129

Which book is between the Maths and English books?

- A Accountancy
- B History
- C Urdu
- D None of the above

Answer: D

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#### Question 130

Which book is at the bottom?



- A Accountancy
- B Punjabi
- C Urdu
- D Cannot be determined

**Answer: A**

**Question 131**

**Which book is at the top?**

- A Punjabi
- B Urdu
- C Accountancy
- D Cannot be determined

**Answer: B**

**Instructions**

Read the following information to mean these answers?

Four friends A, B, C, and D are studying together in Class 10 + 2. A and B are good in Hindi but poor in English. A and C are good in Sanskrit but poor in Geography. D and B are good in Maths as well as Sanskrit.

**Question 132**

**Which of the following pairs of friends is good both in Sanskrit and Hindi?**

- A C - D
- B A - B
- C D - A
- D B - C

**Answer: B**

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**Question 133**

**Which of the following pairs of friends is good both in Maths and Sanskrit?**

- A A and D
- B A and C
- C C and D
- D D and B

**Answer: C**

**Question 134**

**Which of the following friend is good in Sanskrit only but poor in Geography?**

- A A
- B B
- C C
- D D

**Answer: C**

**Instructions**

Read the given information to answer these questions.

Mohan Dey is undecided which four movies to see this week. He is considering a spy thriller, a murder mystery, a comedy and a science fiction. The movies will be shown by TV channels STAR, SONY, B4U and HBO, not necessarily in that order, and telecast on Tuesday, Wednesday, Saturday and Sunday, not necessarily in that order. The movies by STAR will be shown on Sunday. The spy thriller will be shown on Tuesday. The science fiction movies are shown by B4U and not telecast on Saturday. The comedy is shown by HBO channel.

**Question 135**

**On Wednesday Mohan Dey can watch**

- A the science fiction movie
- B the murder mystery
- C the spy thriller
- D the comedy

**Answer: A**

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**Question 136**

**The TV channel SONY will telecast**

- A a comedy on Saturday
- B a science fiction movie on Saturday
- C a murder mystery on Tuesday
- D a spy thriller on Tuesday

**Answer: D**

**Question 137**

**Mohan Dey watched movies on two channels whose names come first and third in the alphabetical order. He did not watch**

- A the movie shown on Wednesday
- B the murder mystery
- C the science fiction movie
- D the movie shown on Tuesday

**Answer: B**

### Instructions

These Questions are based on the statements given below :

Madhu and Shivani are good in Dramatics and Computer Science.

Asha and Madhu are good in Computer Science and Physics.

Asha, Pratibha and Namita are good in Physics and History.

Namita and Asha are good in Physics and Mathematics.

Pratibha and Shivani are good in History and Dramatics.

### Question 138

Who is good in Physics, History and Mathematics, but not in Computer Science?

- A Pratibha
- B Asha
- C Madhu
- D Namita

Answer: D

## MAT Free Solved Previous Papers

### Question 139

Who is good in History, Physics, Computer Science and Mathematics?

- A Namita
- B Asha
- C Madhu
- D Pratibha

Answer: B

### Question 140

Who is good in Physics, History and Dramatics?

- A Pratibha
- B Madhu
- C Shivani
- D Asha

Answer: A

### Instructions

In each of these questions two statements A and B are given followed by two conclusions I and II. Consider both the statements to be true even if they seem to be at variance from commonly known facts. Decide which of the given conclusion is/are definitely drawn from the given statements.

**Question 141**

**Statements :**

- A. If there is shortage in the production of onions, the price of onions will go up.**
- B. Price of onions has gone up.**

**Conclusions :**

- I. There is shortage in the production of onions.**
- II. Onions were exported.**

- A** If only II follows.
- B** If only I follows.
- C** If neither I nor II follows.
- D** If both I and II follows.

**Answer: B**

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**Question 142**

**Statements :**

- A. If all players play to their full potential, we will win the match.**
- B. We have won the match.**

**Conclusions :**

- I. All players played to their full potential.**
- II. Some players did not play to their full potential.**

- A** If only II follows.
- B** If only I follows.
- C** If neither I nor II follows.
- D** If both I and II follows.

**Answer: B**

**Question 143**

**Statements :**

- A. Some business men are rich.**
- B. Soman is rich.**

**Conclusions:**

- I. Soman is a businessman.**
- II. Soman has a big farm.**

- A** If only II follows.
- B** If only I follows.
- C** If neither I nor II follows.
- D** If both I and II follows.

**Answer: C**

**Instructions**

Read the information given below to answer these questions.

Six persons A, B, C, D, E and F are going by car to see Agra. In this group, there are three journalists, a professor and a doctor. In the group, there are two married couples. No man in the group is a professor and a doctor. F is a sick man and lives with his married son C. Among the three journalists, husband of D who looks after his sick father earns more than E, who in turn gets less pay than B. Sister of E gets less pay than her husband 'B' but not more than A.

**Question 144**

**Who is the professor in the group?**

- A B
- B A
- C C
- D Cannot be determined

**Answer: D**

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**Question 145**

**Which of the following is a pair of ladies?**

- A A, C
- B A, D
- C A, B
- D Cannot be determined

**Answer: B**

**Question 146**

**Who among the following earns the least?**

- A B
- B A
- C C
- D D

**Answer: B**

**Instructions**

Each of these consists of a question and two statements numbered A and B. Decide whether the data provided in the statement(s) is/are sufficient/necessary to answer the question.

**Question 147**

**What is the rate of the compound interest?**

- A. A certain amount invested at the compound interest rate amounts to Rs. 1331.
- B. The amount was invested for a period of three years.

A if the data in statement B alone are sufficient to answer the question while the data in statement A alone are not sufficient to answer the question.

- B if the data in statement A alone are sufficient to answer the question, while the data in statement B alone not sufficient to answer the questions.
- C if the data either in statement A alone or in statement B alone are sufficient to answer the question.
- D if the data in both the statements A and together are not sufficient to answer the question.

Answer: D

## Daily Free Topic Test

### Question 148

What is the present age of the mother?

- A. Father's age is eight years more than the mother's age. Father got married at the age of 28 years.
- B. Present age of the father is 30 years. Four years back the ratio of mother's age to father's age was 12 : 13.

- A if the data in statement B alone are sufficient to answer the question while the data in statement A alone are not sufficient to answer the question.
- B if the data in statement A alone are sufficient to answer the question, while the data in statement B alone not sufficient to answer the questions.
- C if the data either in statement A alone or in statement B alone are sufficient to answer the question.
- D if the data in both the statements A and together are not sufficient to answer the question.

Answer: A

### Question 149

How many boys are there in the class?

- A. The class has total 45 children and ratio of boys to girls is 4:5.
- B. The ratio of girls to boys is 4 : 5 and boys are nine more than the girls.

- A if the data in statement B alone are sufficient to answer the question while the data in statement A alone are not sufficient to answer the question.
- B if the data in statement A alone are sufficient to answer the question, while the data in statement B alone not sufficient to answer the questions.
- C if the data either in statement A alone or in statement B alone are sufficient to answer the question.
- D if the data in both the statements A and together are not sufficient to answer the question.

Answer: C

### Question 150

What is the difference between the two digits in a two-digit number?

- A. The sum of the two digits is 8.
- B.  $\frac{1}{5}$  of that number is 15 less than  $\frac{1}{2}$  of 44.

- A if the data in statement B alone are sufficient to answer the question while the data in statement A alone are not sufficient to answer the question.
- B if the data in statement A alone are sufficient to answer the question, while the data in statement B alone not sufficient to answer the questions.
- C if the data either in statement A alone or in statement B alone are sufficient to answer the question.

D if the data in both the statements A and together are not sufficient to answer the question.

Answer: A

## MAT Free Solved Previous Papers

### Question 151

How much minimum marks will be required to pass an examination?

A. Student A secured 32% marks in that examination and he failed by 1 mark. Student B secured 36% marks in the same examination and his marks were 1 more than the minimum pass marks.

B. Student A secured 30% of full marks in the examination and he failed by 2 marks. If he had secured 5 more marks his percentage of marks would have been 40%.

A if the data in statement B alone are sufficient to answer the question while the data in statement A alone are not sufficient to answer the question.

B if the data in statement A alone are sufficient to answer the question, while the data in statement B alone not sufficient to answer the questions.

C if the data either in statement A alone or in statement B alone are sufficient to answer the question.

D if the data in both the statements A and together are not sufficient to answer the question.

Answer: C

### Instructions

Each of the following incomplete arguments is followed by four sentences. One of the four alternatives (a), (b), (c) and (d) completes the argument in order to justify the conclusion. Pick that out.

### Question 152

Man learns through experience as he has initiative by nature.

A All who have initiative by nature learn through experience

B None who have initiative by nature learn through experience

C None who has initiative by nature learns through experience

D Only few with initiative learn through experience

Answer: A

### Question 153

We now have to fight for peace with some courage and determination as we fought against aggression.

A All those who have fought against aggression should fight for peace

B Many are fighting for peace who have fought against aggression

C Some who are fighting for peace have fought against aggression

D None is fighting for peace who have fought for aggression

Answer: A

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**Question 154**

**Education has produced a vast population able to read but unable to distinguish what is worth reading**

- A All educated people can distinguish worth reading materials
- B Many educated people cannot distinguish worth reading materials
- C As much as educated people are there, it is easy to distinguish worth reading materials.
- D All those who are educated cannot distinguish the materials worth reading

**Answer: B**

**Instructions**

In each of these questions a few Statements are followed by four conclusions numbered I, II, III and IV. Consider the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusion(s) and then decide which of the given conclusion(s) logically follow(s) from the given statements.

**Question 155**

**Statements :**

- A. All mirrors are phones,
- B. Some phones are gadgets.
- C. All gadgets are mirrors.

**Conclusions :**

- I. Some gadgets are phones,
- II. Some gadgets are mirrors.
- III. Some gadgets are not mirrors.
- IV. Some mirrors are phones.

- A Only I, II and IV follow
- B None follows
- C Only I and III follow
- D Either II or IV follows

**Answer: A**

**Question 156**

**Statements :**

- A. All rackets are jackets
- B. No cow is cat.
- C. Only cats are dogs.

**Conclusions :**

- I. Some rackets are not cats.
- II. Some cats are jackets.
- III. Some rackets are cats.
- IV. No dog is a cow.

- A Only II and IV follow
- B Only either I or II and IV follow
- C Only III and IV follow
- D Only I and IV follow

**Answer: B**



Question 157

Statements:

- A. All stairs are lifts.
- B. No lift is an escalator.
- C. Some escalators are helicopters.
- D. Some lifts are planes.

Conclusions:

- I. No stairs is an escalator,
- II. Some helicopters are not escalators.
- III. Some stairs are planes.
- IV. Some helicopters are escalators.

- A Only I and IV follow
- B Only I and either II or IV follow
- C Either II or IV follows
- D Only I, III or IV follows

Answer: A

Instructions

Each question has a main statement, followed by four, statements labelled A, B, C, and D. Choose the ordered pair of statements where the first statement implies the second, and the two statements are logically consistent with the main statement.

Question 158

Every player will become a champ.

- A. Rajesh is a player.
- B. Rajesh will become a champ.
- C. Rajesh is not a player.
- D. Rajesh will not become a champ.

- A DA
- B AD
- C CD
- D DC

Answer: D

Question 159

You can find Chinese toys only in China.

- A. I didn't find Chinese toys.
- B. I found Chinesetoys.
- C. I wentto thefair.
- D. I didn't go to China.

- A CB
- B CD
- C CA
- D AD

Answer: C

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### Question 160

Only in Africa, you can see the African elephant.

- A. You went to Africa.
- B. You didn't go to Africa.
- C. You saw the African elephant
- D. You didn't see the African elephant.

A DB

B AC

C AD

D BD

Answer: D

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### Indian & Global Development

#### Instructions

For the following questions answer them individually

### Question 161

How many companies from India found a place in the 'Global-500' list?

A 5

B 4

C 8

D 10

Answer: A

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### Question 162

For the year 2007-08, World Bank has predicted India's GDP growth at

A below 8%

B below 7%

C 8.5%

D 9.6%

Answer: B

**Question 163**

National Electricity Policy envisages elimination of power shortage by 2012 through addition of ..... during 10th and 11th Plan periods.

- A 75,000 MW
- B 50,000 Mw
- C 1,00,000 MW
- D 1,25,000 MW

**Answer: C**

**Question 164**

Recently Tata Consultancy Services (TCS) has succeeded in acquiring a big deal from Bank of China worth

- A \$ 75 million
- B \$ 50 million
- C \$ 100 million
- D \$ 125 million

**Answer: C**

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**Question 165**

As per the latest estimates of Petroleum Ministry, India's refining capacity will be increased to ..... million tonnes per annum by the end of coming 11<sup>th</sup> Plan.

- A 220
- B 210
- C 230
- D 240

**Answer: D**

**Question 166**

"Beyond Scarcity : Power, Poverty and Global Water Crisis" is the theme of

- A Human Development Report 2006
- B Human Development Report 2005
- C World Development Report 2005
- D World Development Report 2006

**Answer: A**

**Question 167**

Report of the Sachar Committee is related to

- A status of the Scheduled Castes in India
- B social, economic and educational status of the Muslim Community
- C economic status of Backward Classes in India
- D None of the above

Answer: B

## Daily Free Topic Test

### Question 168

According to the Global Gender Gap Report, 2006 by the World Economic Forum, the country which has provided more political empowerment to women among the following is

- A USA
- B India
- C Sri Lanka
- D Bangladesh

Answer: D

### Question 169

According to the Human Development Report 2006 of UNDP, the position of India in Human Development Index is

- A 135<sup>th</sup>
- B 126<sup>th</sup>
- C 137<sup>th</sup>
- D 81<sup>st</sup>

Answer: B

### Question 170

Noted author and activist Arundhati Roy has been supporting the farmers of Singur in West Bengal who are resisting the State Government move to acquire land and give it to

- A Tata Motors
- B Maruti Ltd.
- C Infosys
- D Hindustan Motors

Answer: A

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### Question 171

Year 2007 is being celebrated by India & China as the

- A Tourism year
- B Friendship year
- C Co-operation year
- D None of the above

**Answer: B**

**Question 172**

The 14<sup>th</sup> Asia Pacific Economic Co-operation (APEC) 2006 Summit was held in

- A Thailand
- B Vietnam
- C Brazil
- D China

**Answer: B**

**Question 173**

In the Union Budgets in India, which one of the following is the largest in amount?

- A Non-Plan expenditure
- B Plan expenditure
- C Revenue Expenditure
- D Capital Expenditure

**Answer: A**

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**Question 174**

Centre for DNA finger printing is located at

- A Bangalore
- B New Delhi
- C Pune
- D Hyderabad

**Answer: D**

**Question 175**

Cryogenic engines are used in

- A atomic reactors
- B rockets

C defrost refrigerators

D doing research connected with superconductivity

**Answer: B**

**Question 176**

'Threat of global warming' is increasing due to increasing concentration of

A Nitrous oxide

B Ozone

C Sulphurdioxide

D Carbon dioxide

**Answer: D**

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**Question 177**

The 2008 Olympic Games will be held at

A Montreal

B Beijing

C Atlanta

D London

**Answer: B**

**Question 178**

Narain Karthikeyan is a sportsman in the field of

A shooting

B car racing

C chess

D golf

**Answer: B**

**Question 179**

El Nino is

A a sea storm

B a warm ocean current

C a tropical disturbance

D another name of typhoon

Answer: B

## Daily Free Topic Test

### Question 180

Which of the following industries are the major beneficiaries of the Mumbai port?

- A Sugar and cotton textile industry
- B Iron and Steel industry
- C Cotton textile and Petrochemical industry
- D Engineering and Fertilizer industry

Answer: C

### Question 181

The World Trade organisation (WTO) was earlier known as

- A UNICEF
- B GATT
- C UNCTAD
- D FAO

Answer: B

### Question 182

What is Value Added Tax (VAT) ?

- A A new initiative taken by the government to increase the tax-burden of high income groups
- B A simple, transparent, easy to pay tax imposed on consumers
- C A single tax that replaces State taxes like surcharge, turnover tax, etc
- D A new tax to be imposed on the producers of capital goods

Answer: C

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### Question 183

The outcome of 'devaluation of currency' is

- A increased export and foreign reserve deficiency
- B increased export and improvement in balance of payments
- C increased import and improvement in balance of payments
- D increased export and import

Answer: B

**Question 184**

The common currency which has been introduced among 11 European nations is known as

- A Euro
- B Euro Pound
- C Euro Dollar
- D None of the above

**Answer: A**

**Question 185**

Nuclear reactors used to produce electricity are based on

- A nuclear fusion
- B nuclear fission
- C cold fusion
- D superconductivity

**Answer: C**

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**Question 186**

Who amongst the following was the head of the Investment Commission which submitted its report to the government of India recently?

- A Dr. Rakesh Mohan
- B Mr. Ratan Tata
- C Mr. Kumar Mangalam Birla
- D Mr. Rahul Bajaj

**Answer: B**

**Question 187**

Mr. Arvind Kejriwal who got the Ramon Magasaysay Award 2006 is the founder of which of the following NGOs.

- A Aswahan
- B Sanklap
- C Parivartan
- D Sammelan

**Answer: C**

**Question 188**

Which bank has launched a new health cover scheme under the name of "Arogya shree"?



- A PNB
- B SBI
- C Andhra Bank
- D OBC

Answer: A

## Free Gk Tests

### Question 189

The Eleventh Five Year Plan has been named as

- A 'Towards Fast and More Inclusive Growth'
- B 'Towards Infrastructural and Agricultural Growth'
- C 'Towards Rapid Educational and Economical Growth'
- D None of the above-average

Answer: A

### Question 190

Which of the following State Governments has decided to provide health insurance to people living below the poverty line with effect from January 2007?

- A Andhra Pradesh
- B Orissa
- C Karnataka
- D West Bengal

Answer: C

### Question 191

In November 2006, Prime Minister Dr. Manmohan Singh and Chinese President Hu Jintao signed how many agreements including the Bilateral Investment Protection agreement, in New Delhi?

- A 11
- B 15
- C 13
- D 9

Answer: C

## Daily Free Topic Test

**Question 192**

What is the position of **Tatas**, the largest Indian group in terms of revenues and market capitalisation, in the Forbes' list of world's most reputed companies?

- A 20<sup>th</sup>
- B 18<sup>th</sup>
- C 22<sup>nd</sup>
- D 24<sup>th</sup>

**Answer: A**

**Question 193**

The Indian Railway has decided to start how many new luxury trains on the line of "Palace on wheels" to ensure foreign customer?

- A 6
- B 4
- C 10
- D 15

**Answer: B**

**Question 194**

**ASEAN**, the major trade block of the world, consists of the following nations

- A Indonesia, Malaysia, Singapore
- B India, Bangladesh, Myanmar, Sri Lanka and Pakistan
- C Indonesia, India, Thailand, Malaysia and Singapore
- D Vietnam, Thailand, Mauritius, Singapore and Philippines

**Answer: A**

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**Question 195**

The states through which the **Cauvery** river flows is

- A Kerala, Karnataka and Tamil Nadu
- B Andhra Pradesh, Karnataka and Tamil Nadu
- C Kerala, Andhra Pradesh and Tamil Nadu
- D Maharashtra, Karnataka and Tamil Nadu

**Answer: A**

**Question 196**

Which one of the following is not correctly matched?

- A White – Dairy
- B Green Revolution – Agriculture
- C Blue Revolution – Fishery
- D Red Revolution – Wool

**Answer: D**

**Question 197**

**Which one of the following is not a department in the Ministry of Human Resource Development?**

- A Department of Secondary Education and Higher Education
- B Department of Elementary Education and Literacy
- C Department of Technical Education
- D Department of Woman and Child Development

**Answer: C**

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**Question 198**

**In India, National Income is estimated by**

- A Central Statistical Organisation
- B Planning Commission
- C Indian Statistical Institute
- D National Sample Survey Organisation

**Answer: A**

**Question 199**

**Which state in the country has the largest number of districts?**

- A Maharashtra
- B Madhya Pradesh
- C Tamil Nadu
- D Uttar Pradesh

**Answer: D**

**Question 200**

**Who among the following has been given 'World Citizenship Award' 2006?**

- A Jimmy Carter
- B Kofi Annan

C Bill Clinton

D Ronald Reagan

Answer: C

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