SECTION 1: VARC

Q1. DIRECTIONS *for question 1*:

The sentences given below, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a number (1, 2, 3, 4, or 5). Decide on the proper order for the sentences and key in the correct sequence of five numbers as your answer in the input box given below the question.

1. Although there have been claims that therapies like “holistic medicine” and “behavioural intervention”, aimed at training an autistic child directly to behave in desirable ways can work, the evidence they actually do so is poor.

2. As children, they often struggle to communicate, are anxious in situations unproblematic for anyone else and may behave in repetitive ways that disturb others.

3. All this, observes Tony Charman, a clinical psychologist at King’s College, London, leaves parents of autistic children vulnerable to false promises.

4. Autism may bring a lifetime of disability and difficulty to the most severely afflicted.

5. As adults, they may be shunned – or even ostracise

DIRECTIONS *for questions 2 to 7:*

The passage given below is followed by a set of six questions. Choose the best answer to each question.

Has the artificial intelligentsia shown that the intelligent and sentient human brain is really a computer? Some artificial intelligentsia members believe so. Marvin Minsky argues that in time we will understand the human brain structure sufficiently well to reproduce it in machine form. Ray Kurzweill concurs “By the third decade of the 21st century, we will create detailed maps of the computationally relevant features of the human brain and re-create these designs in advanced neural computers.
Many agree that the distinction between mind and machine is blurred. The human mind, Steven Pinker has written, is nothing but a system of organs of computation. For Daniel Dennett, ‘Conscious human minds are more-or-less

serial virtual machines implemented – inefficiently – on the parallel hardware that evolution has provided for us. If all the phenomena of human consciousness are explicable as just the activities of a virtual machine realized in the astronomically adjustable connections of a human brain, then a suitably programmed robot, with a silicon based computer brain, would be conscious, would have a self. There would be a conscious self whose body was a robot and whose brain was a computer.

However, others have questioned whether it is technically feasible to understand the human brain, let alone reproduce it in artificial form. Charles Jonscher points to the complexity of the human brain as compared to the computer. “There may be 100 trillion neurone connections in the brain cortex alone. The largest processor chip has, by contrast, ten million wiring connections. We don’t just have the power of a single computer in our heads. The true comparison would be a figure more like 20 billion computers. The complexities involved are genuinely difficult to imagine?”

“A neurone”, Jonscher adds, “is a whole living cell, a hugely sophisticated processor of materials, energy and information in its own right. We are only beginning to get a feel for the millions of component substructures which make up a single cell. The most powerful computers cannot compare with the simplest of living cells.” Jonscher believes that there exists a cultural divide between biology and computer science: “Computer engineers talk of matching the power of the brain. Biologists look into their microscopes and wonder if we have matched the computational power of a single one of its cells.”

The arrival in 1997 of Dolly, the sheep, transformed our vision of what is possible. Why should it not be the same with the human brain? Perhaps in 50 years time, we will have unraveled the mysteries of neuronal connections, as Minsky and Kurzweill believe, and managed to build machines equally complex. We (or our children) will then wonder how humans could possibly have thought the brain too complex to comprehend. …

At the heart of John Searle’s argument is the distinction between syntax and semantics. Syntax refers to the rules by which symbols may be manipulated, and which tell me whether a string of symbols is well formed or ill-formed. In English, syntax consists of the grammatical rules which tell me how to create valid sentences. Semantics refers to the meaning of symbols, to what a symbol is about. Syntax refers to the structure of a language (or a system of formal logic), semantics to its content. Syntax is the outside of a sentence, semantics its innards.

What does the distinction between syntax and semantics mean for the question of machine sentience? A computer, when it computes, manipulates symbols. Its programme specifies a set of rules or algorithms, which tell it how to transform one set of symbols into another. But it does not specify what those symbols mean. Indeed, to a computer meaning is irrelevant. A computer programme restructures the outside of a symbolic string, without worrying too much about what is on the inside. For humans, however, the

inside is crucial. In all speech, Ben Johnson wrote, words and sense are as the body and soul. The sense is as the life and soul of language without which all words are dead. The dualism of body and soul may be unfashionable but the dualism of which Johnson speaks, the dualism of words and sense, is the one we cannot do without. To a human, meaning is everything. When we communicate, we communicate meaning.

Q2. The distinction between the structure and meaning of a language

a) illustrates that the two can be separated even though 'body' and 'soul' cannot be separated.

b) demonstrates that a computer can replicate the syntax of a language.

c) brings out their relevance for making a sentient machine.

d) shows that it is impossible to replicate the human mind in the foreseeable future.

Q3. According to the passage, which one of the following does not belong to a common group?

a) Daniel Dennett
b) Ray Kurzweill
c) Charles Jonscher
d) Marvin Minsky

Q4. Regarding the complexity of the human brain, the author is of the view that

a) we cannot reproduce a single cell, leave alone the whole brain.

b) replication would, in time, be within the realm of probability.

c) it is the source of irreconciliable difference between biologists and artificial intelligence scientists.

d) if eminent scientists working at the cutting edge of machine intelligence say it is impossible, it must be so.

Q5. What is Daniel Dennett trying to convey about the consciousness of the human brain in the passage?

a) The human brain is an example of a series of virtual machines implemented efficiently and can be likened to a system of computation.

b) Creating a robot with a silicon based computer brain with total consciousness is impossible.

c) There are a lot of similarities between a computer and a human brain and the human brain's consciousness can be explained by the means of machines.

d) It is possible to create a robot with human consciousness if the consciousness is realized in a computer.

Q6. Which of the following can be inferred from the passage?

1. Charles Jonscher believes that biologists and computer engineers are at loggerheads with each other when it comes to establishing the supremacy of the brain over the computer and vice versa respectively.

2. Marvin Minsky is of the view that the scientific discipline of artificial intelligence comprises the attempt to make machines operate in a manner that would require the intelligence of men.
3. If thought is some kind of conscious experience dependent on meaning and machines cannot have such conscious experiences as they do not derive meaning, then we can say that machines cannot think.

4. The human brain tries to define and add meaning to everything given to it.

a) b and c

b) a and d

c) a, b and c

d) Only c

Q7. How is the last para related to the penultimate para?

a) It disproves the idea mentioned in the penultimate para.

b) It reiterates the idea given in the penultimate para.

c) It extends and applies the idea highlighted in the penultimate para.

d) *It explains and supports the central idea of discussion in the penultimate para.*

Q8. DIRECTIONS *for question 8*:

The sentences given below, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a number (1, 2, 3, 4, or 5). Decide on the proper order for the sentences and key in the correct sequence of five numbers as your answer in the input box given below the question.

1. Sceptics used to reply that talk was cheap coming from Germany, which had been spared major incidents of the sort that have struck America, France, Turkey and other countries.

2. But Germany's dark history has taught it not to over-react.

3. Ask some Germans how people should react to terrorism and most would agree with the historian Herfried Münkler that the best attitude is heroic calmness.

4. That changed in the space of one week this month, when Germany suffered four very different attacks in Munich and elsewhere.

5. Let other countries declare wars on terrorism and near-permanent states of emergency, they say.

Q9. DIRECTIONS *for question 9*:

The sentences given below, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a number (1, 2, 3, 4, or 5). Decide on the proper order for the sentences and key in the correct sequence of five numbers as your answer in the input box given below the question.

1 They found not one, but thousands of clay soldiers, each with unique facial expressions and positioned according to rank.

2 The terra-cotta army, as it is known, is part of an elaborate mausoleum or form of funerary art created to accompany the first emperor of China, Qin Shi Huang, into the afterlife.

3 The soldiers are in trenchlike, underground corridors and are surrounded by clay horses and wooden chariots.

4 The diggers notified Chinese authorities, who dispatched government archaeologists to the site.

5 Workers digging a well outside the city of Xi'an, China, in 1974 struck upon one of the greatest archaeological discoveries in the world: a life-size clay soldier poised for battle.

DIRECTIONS *for questions 10 to 12:*

The passage given below is followed by a set of three questions. Choose the best answer to each question.

For all of the time in which music has played an integral role in movements for social progress, it is only recently that academic theorizing has begun to take notice of these links. The two major areas of attention to aesthetics-politics overlap are the discourse in social aesthetics in cultural studies and the broadly interdisciplinary area of improvisation theory.
Social Aesthetics
Social aesthetics starts with a consideration of the extent to which one's membership in community –one's social identity – shapes one's approach to art appreciation. This approach is exemplified by French sociologist Pierre Bourdieu's critical rebuttal of Kantian aesthetics on the grounds that "taste" is not a universal trait which identifies a single standard of artistic merit but is instead indexed to one's class position. Bourdieu offers a detailed, fine-grained argument for this hypothesis in his 1984 book *Distinction*, which discusses the results of surveys of respondents from a cross-section of social classes in France of the 1970s. Contrasting working class, bourgeois, and elite preferences in entertaining, decorating, leisure activities, music, and film, Bourdieu argues that what we find beautiful is indeed demonstrably shaped by our class positions and trajectories. This reveals aesthetic preferences as socially-inflected, hence political, regardless of how natural they might seem to their bearers. The net effect of Bourdieu's intervention is

repudiation of a universalist aesthetic hierarchy in which the cultural preferences of the elite class are judged as better than those of the working class, in favor of a relativist indexing of artistic productions to class positions.
While the research into musical tastes that explicitly engages the notion of class is being done in the European context, it is not hard to see how this discourse asserts itself in American accounts of taste. The concepts of "highbrow" music – Western art music, or "classical" – and "lowbrow" music – popular, mass-marketed productions, from jazz in the 1930s to rock in the 1950s through 1980s and, most recently, hip-hop – link tastes to education and income levels, which appear in the American lexicon as stand-ins for the concept of class. Understanding this linguistic translation makes it possible for us to employ a social aesthetics reading of the claims in the history of American musical production that otherwise seem unmotivated. John Coltrane's rejection of the label "jazz" for his music, and his preference for labeling jazz "America's classical music" can be interpreted as a contestation of the class position to which jazz musicians and their art-making had to be relegated. This contestation does not achieve the relativism of Bourdieu's inventory, but it does underscore the connection between social identity and aesthetic taste.

Q10. Which of the following can be attributed to Pierre Bourdieu as can be inferred from the passage?

a) He asserts that cultural preferences of the elite class are by far the most superior.

b) He forsakes Kantian aesthetics which prioritizes class positions and trajectories as important factors that shape one's approach to art appreciation.

c) He believes in a single universal standard of artistic merit.

d) *He is of the view that artistic taste is socially-modulated and linked to one's class position.*

Q11. Which of the following is the main idea of the passage?

a) There is a direct linkage between social identity and aesthetic appreciation.
b) Similar social structures determine social identity patterns and this in turn influences the art appreciation milieu in European societies but not in American societies.

c) Social class boundaries are determined by unequal aesthetic preferences.

d) During the 1930s, Jazz music was relegated to the “lowbrow” music class in America where social identity was based on education and income levels.

Q12. What is the style of the author in the passage?

a) Contentious and critical.
b) Explanatory and descriptive.
c) Reflective and scrutinizing.
d) Evaluative and pedagogic.

Q13. DIRECTIONS *for question 13*: The sentences given below, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a number (1, 2, 3, 4, or 5). Decide on the proper order for the sentences and key in the correct sequence of five numbers as your answer in the input box given below the question.

1 First, regardless of their age, the ratio within them of two stable isotopes of oxygen (16O and 18O) indicates what the average temperature was when they were alive.

2 For climate researchers, forams which are single-celled marine creatures growing shells made of calcium carbonate are doubly valuable.

3 Second, for those forams less than about 40,000 years old, the ratio of an unstable, and therefore radioactive, isotope of carbon (14C) to that of stable 12C indicates when they were alive.

4 That means the rock they are in can be dated.

5 That is because different temperatures cause water molecules containing different oxygen isotopes to evaporate from the sea at different rates; what gets left behind is what the shells are formed from.

Q14. DIRECTIONS *for question 14*: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

1 They conjure up a dark vision of the future, in which people appear as mindless consumer- creatures, surrounded by standardised goods, educated in standardised schools, fed a diet of standardised mass culture, and forced to adopt standardised styles of life.

2 Today in the techno-societies there is an almost ironclad consensus about the future of freedom.

3 If instead of blindly accepting this syllogism, we stop to analyze it, however, we make an extraordinary discovery.

4 Maximum individual choice is regarded as the democratic ideal.

5 Yet most writers predict that we shall move further and further from this ideal.

DIRECTIONS *for questions 15 to 17:* The passage given below is followed by a set of three questions. Choose the best answer to each question.

The contract model of political association is an attractive way for liberals to conceive of political association because it does not presuppose that political society is directed towards any substantive end or goal. … Because the liberal state does not take a substantive view on what constitutes living well, but rather only a procedural view on how people interact within the terms of their rights and liberties, it is often described as being neutral about ultimate ends. The neutral state does not presuppose any basic values or conceptions of the good.

The concept of neutrality is a complex notion that confusingly includes what might be called neutrality of policy outcomes and neutrality of their justification i.e. the consequences of policy should not privilege any conception of the good or conceptions of ultimate values. This conception, which has been attributed to some liberals, is incoherent. Either the state prohibits abortion, privileging those who believe in the priority of rights of the unborn, or it permits abortion, privileging the rights of mothers to decide whether to carry a pregnancy to term. A policy of indifference would necessarily privilege one side or the other, as there is no third way.

A liberal policy of toleration has the effect of privileging the views of tolerant liberals over those of non-tolerant non-liberals. Liberal egalitarians are more concerned with neutrality in justification. The justification of liberal principles must emerge from a procedure that does not simply presuppose the truth of a particular conception of a good life. The really hard thing is to provide those who are not already liberal egalitarians with reasons to accept a liberal political order. Yet, liberalism does take a view on the core ethical significance of individuals. Surely this means that liberals are not neutral between those moral, political and religious doctrines that offer a more holistic account of the individual in relation to community, nation or Church? …. Liberals sympathetic to the Rawlsian project have abandoned the concept of neutrality in favour of impartiality.

Impartiality theorists do not claim that liberalism is free of any fundamental value commitments. Liberalism must give priority to equality of concern and the idea of the separatedness of persons – that individuals have ultimate moral significance and cannot be sacrificed for the good of others. Instead, they attempt to model these basic values in a way that does not presuppose any single conception of the good life.

Rawls believes that the principles of justice necessary to guarantee a fair basic structure not privileging any particular group is that set which would be agreed upon in a special agreement. However, if people are allowed to enter the agreement with full knowledge of their own position in society, they will have a tendency to bargain to maximize their own advantage. The initial

agreement takes place behind the veil of ignorance which filters out from individual decision making the biases of self-preference and partiality. Rawls' basic intuition is that fairness or impartiality can be achieved by combining ignorance with self-interest. If we do not know who we are, but we are motivated to improve our condition in life, we will choose Rawls' principles of justice.

Q15. Why is the neutrality of policy outcomes termed as an 'incoherent conception' by the author?

a) A policy outcome to the total exclusion of reinforcement of rights of someone or the other is not in the realm of possibility.
b) A government will be dubbed as directionless if it ignores the conception of the good or of the ultimate values.
c) Ideologically it is impracticable to maintain neutrality.
d) A policy aimed at a neutral outcome can privilege only the tolerant liberals.

Q16. The expression "neutral about ultimate ends" in the passage means

a) The ends being secular in nature.
b) The ends delivering a particular privilege to the state machinery but no particular advantage to any individual over the other.
c) The absence of any preconceived idea about what constitutes the public good.
d) Everyone in the society working towards common ends.

Q17. Which of the following can be inferred from the passage?

a) Rawls believed that a veil of ignorance prevented individuals from acting selfishly.
b) The idea fundamental to the views of 'impartiality theorists' is the recognition of an individual's ethical significance.
c) Self-interest should be a principle other than ignorance needed to achieve impartiality as it provides the stimulus for bettering one's condition.
d) All of the above.

Q18. **DIRECTIONS** *for question 18*: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

1 Value, the leading edge of reality, is no longer an irrelevant offshoot of structure but it is the preintellectual awareness that gives rise to structure.

2 Then, depending on the value-looseness of the observer and the potential quality of the fact, its value increases, either slowly or rapidly, or the value wanes and the fact disappears.

3 When it comes along, it always has, at first, a low value.

4 It's dualistically called a wonderful 'discovery' because of the presumption that it has an existence independent of anyone's awareness of it.

5 The birth of a new fact is always a wonderful thing to experience.

DIRECTIONS *for questions 19 to 21:* The passage given below is followed by a set of three questions. Choose the best answer to each question.

Mimicking the subject itself, the study of business cycles has undergone periods of remarkable progress and unexpected regression, of irrational confidence in our knowledge and unjustified skepticism in the ability of economists to make economies work better. However, the best way to judge our understanding of recessions and depressions, just like the best way to judge economies themselves, is to evaluate their long-run record of growth. By this measure there has been real and significant progress. All one has to do is look back at the first models of business cycles, which centered around things such as sun spots and weather fluctuations, to understand just how far the study of economic contractions has come. These early models were simple and focussed on a single cause of business cycles. Both experience and research have taught us, however, that there is nothing simple about recessions and depressions. Their characteristics are variable, their fundamentals complex, and their transmission unclear.

While the first modern theories of business cycles, the Keynes /Keynesian and Monetarist models, agree that fluctuations in aggregate demand are the source of business cycles, they do not agree upon what causes these fluctuations. Keynesians believe the culprit is unstable expectations that lead to investment and consumption volatility. Coupled with wage and price inflexibility, these fluctuations in investment and consumption lead to large swings in aggregate output. Because these fluctuations represent lost output, there is a responsibility for the government to improve welfare by using counter-cyclical fiscal and monetary policy to stabilize aggregate demand and output.

Monetarists, on the other hand, assert that monetary policy is responsible for business cycles because central bankers insist on conducting just the kind of stabilization policy that Keynesians advocate. Monetarists believe that wages and prices are perfectly flexible, and believe in the natural rate hypothesis, or the principle that aggregate supply determines output in the long-run and changes in aggregate demand affect only in the short-run.

Because policy makers have limited information, especially about what the natural rate actually is, central bankers often aim too high in an effort to stimulate output in the short-run, creating excessive inflation in the long run. When faced with the fact that higher and higher levels of inflation are necessary to keep output at or above the natural rate, the central bank is eventually forced to reverse course and create a recession in order to reduce inflation. This means that monetary policy becomes a destabilizing, not a stabilizing, factor in the economy.
The Rational Expectations model, with its assertion that only unexpected changes in policy can have rare effects on output, both supports and diverges from the Monetarist model. Like the Monetarists, Rational Expectations proponents believe that stabilization policy is destabilizing and inflationary. However, by asserting that only unexpected changes in monetary policy have real effects, the Rational Expectations model raises significant questions about how monetary policy can be the primary source of business cycles in a world where economic information is widely available, especially in terms of explaining the source of large economic contractions such as the Great Depression.
Real business models argue that changes in aggregate productivity create fluctuations in aggregate supply that are the primary determinant of fluctuations in output. Because business cycles are optimal responses to changes in the real fundamentals of an economy, laissez-faire policies are preached by Real Business Cycle economists.

Q19. The Rational Expectations model discounts the efficiency of monetary policy in causing business cycles because

a) the stabilization policy is actually what causes imbalance in the system.
b) of its inability to explain large economic contractions such as the Great Depression.
c) of the lack of surprise element in monetary policy changes.
d) people are not better informed when it comes to economic matters in today's times.

Q20. Which of the following can be understood from the discussion on theories and models?
Identify all that apply and enter the corresponding number in the input box given below. You must enter your answer in increasing order only. For example, if you think (1) and (2) apply, then enter 12 (but not 21) in the input box.

1 The Rational Expectationists and the Monetarists are at variance with each other on their perception of the reasons for changes that take place in an economy.

2 The proponents of the Rational Expectation model and those of the Real Business Cycle model share a common view on the role played by the government in regulating money supply.

3 While the Keynesian and the Monetarists see eye to eye on how swings take place with relevance to requirements, they do not share a view on how these relate to the economy.

4 When it comes to belief in the value of government's intervention, the proponents of the Monetarist model and those of the Real Business Cycle model stand on one side of a divide, the Keynesians and the Rational Expectationists on the other.

5 The proponents of the Real Business Cycle model believe that careful and constant guidance by the government is what helps an economy cope with change.

Q21. Why does the author of the passage want us to look back at the first models of business cycles?

a) To find out how the economy has grown in the long run.
b) To get an idea of the progress made in our understanding of recessions and depressions.
c) To arrive at a simple and uncomplicated model of business cycles.
d) To understand the difficulty in detecting the source of a very complex economic phenomenon.

Q22. DIRECTIONS *for questions 22 and 23*: In the question, the word in capitals is used in **five** different ways. Identify the option(s) in which the usage of the word is INCORRECT or INAPPROPRIATE and enter the number corresponding to the sentence(s) (in which the usage is INCORRECT or INAPPROPRIATE) in the input box provided below each question. [Note: Enter your answer in increasing order only. For example, if you think that sentences (2) and (4) are incorrect, then enter 24 (but not 42) in the input box].

HIT

1 The reason for his moody behaviour hit at me and I began to look at the situation in a new light.

2 Rohan managed to score a hit with his bosses by hitting the high points in the meeting as he had prepared well.

3 I didn't think Janice and Bosco would hit it out since they were as different from each other as chalk is from cheese.

4 He hit the nail on the head with his accurate description.

5 The army marched all night and hit the town at dawn.

Q23. DIRECTIONS *for questions 22 and 23*: In the question, the word in capitals is used in **five** different ways. Identify the option(s) in which the usage of the word is INCORRECT or INAPPROPRIATE and enter the number corresponding to the sentence(s) (in which the usage is INCORRECT or INAPPROPRIATE) in the input box provided below each question. [Note: Enter your answer in increasing order only. For example, if you think that sentences (2) and (4) are incorrect, then enter 24 (but not 42) in the input box].

TURN

1 If you stop daydreaming and just turn to, you will complete your project work soon.

2 My father did not turn a hair when the doctor told him he would not regain the use of his right arm.

3 Even as his opponent had done him an ill turn, this new development should turn the scales in favour of our candidate contesting the local council elections.

4 Blessed with an appealing turn of phrase, Reshma performed brilliantly in oratorical contests.

5 The kebabs were cooked by a turn.

DIRECTIONS *for questions 24 to 26:* The passage given below is followed by a set of three questions. Choose the best answer to each question.

The role of language as a vehicle of thought enables human thinking to be as complex and varied as it is. With language one can describe the past or speculate about the future and so deliberate in the light of one's beliefs about how things stand. Language enables one to imagine counterfactual objects, events, and states of affairs; it is intimately related to intentionality, the feature of all human thoughts whereby they are essentially about, or directed toward, things outside themselves. Language allows one to share information and to communicate beliefs, attitudes and emotions. Indeed, it creates the human social world, cementing people into a common history and life-experience. Language is equally an instrument of understanding and knowledge; the specialized languages of mathematics and science enable human beings to construct theories and to make predictions about matters they would otherwise be completely unable to grasp.

Pre-linguistic infants can solve quite complex problems such as those involving spatial memory. This indicates real thinking, and it suggests the use of systems of representation – "maps" or "models" of the world – encoded in nonlinguistic form. Similarly, among human adults, artistic or musical thought does not demand specifically linguistic expression: it may be purely visual or

auditory. A more reasonable hypothesis regarding the connection between language and thought, therefore, might be the following: first, all thought requires representation of one kind or another; second, whatever may be the powers of nonlinguistic representation that human adults share with human infants and some other animals, those powers are immensely increased by the use of language.
But language can be potentially misleading as evident from the misinterpretation of political statements, works of literature, legal documents, and scientific treatises. The “mist and veil of words,” as the Irish philosopher George Berkeley described it, is a traditional theme in the history of philosophy. Confucius held that when words go wrong, there is no limit to what else may go wrong with them; “the civilized person is anything but casual in what he says.” This view is often associated with pessimism about the usefulness of natural language as a tool for acquiring knowledge; it has also inspired efforts by some philosophers and linguists to construct an “ideal” language, one that would be semantically or logically “transparent.” Gottfried Wilhelm Leibniz envisioned a “universal characteristic” that would enable people to settle their disputes through a process of pure calculation, analogous to the factoring of numbers. The rapid development of modern mathematical logic similarly inspired the idea of a language in which grammatical form would be a sure guide to meaning, so that the inferences that could legitimately be drawn from propositions would be clearly visible on their surface.
Outside philosophy there have often been calls for replacing specialized professional idioms with “plain” language, which is always presumed to be free of obscurity and therefore immune to abuse. George Orwell, initially an enthusiast, turned against the idea in his novel 1984, which featured the thought-controlling “Newspeak.” Yet he continued to hold the doubtful ideal of a language as “clear as a windowpane,” through which facts would transparently reveal themselves.

Q24. Which of the following will best conclude and complete the first paragraph of the passage?

a) Language can hence be used to separate imagination from intentionality.

b) But language may also be the source of cognitive failures, of course.
c) Language, in short, makes it possible for individual human beings to escape cognitive imprisonment in the here and now.
d) In scriptural interpretation, for example, it is imperative to distinguish true interpretations of a text from false ones.

Q25. The author mentions “musical thought” and “maps or models of the world” in para 2 to suggest that?

a) The evidently close connection between language and thought does not imply that there can be no thought without language.
b) Language can be used as a means of communication of our thoughts.
c) A text can be misconceived through alien categories entrenched in an agent's own language.
d) There can be no thought without language.

Q26. According to the author, what should be the characteristics of an ideal language?

a) An ideal language should follow the principles of formal logic so as to enable one to draw clear inferences.
b) An ideal language should be semantically or logically transparent.
c) An ideal language should not disguise ideas behind a veil of words; it should not use metaphors, idioms, analogies and allegories.
d) Cannot be determined.

Q27. DIRECTIONS *for question 27*: The following question has a paragraph from which a sentence has been left incomplete. From the given options, choose the one that completes the blank in the paragraph in the most appropriate way. Enter the number alongside the correct answer choice in the input box given below the question.
Can science and meditation, each dealing with different phenomena, have common ground? Physics deals with the external world of matter, space and time, from the giant galaxies in outer space down to the infinitesimally small particles which make up the atom. Meditation looks inward; its domain is that which is not physical. When we close our eyes during meditation, we are cutting off the senses which connect us with the physical world. _____. We are investigating the nature of the inner consciousness which makes us alive, alert and aware of the world around us.

1 Meditation, by looking inward, explores the nature of our consciousness.
2 What we percieve at this time cannot be smelled, heard, tasted, touched or seen.
3 The physical world includes everything that is external to the individual – the people and the environment.
4 During meditation, we find that even when there are no thoughts in the mind, the understanding remains.
5 In meditation, new grooves are formed in the brain and the mind moves upwards in the new spiritual grooves.

Q28. DIRECTIONS *for question 28:* There are two blanks in the following question. From the pair of words given below the question, choose the pair where both the words fill the blank most appropriately. Enter the number

alongside the correct answer choice in the input box given below the question.

Studs Terkel was a Pulitzer prize-winning author who, for nearly half a century, was the ________________ host of a popular radio show in Chicago. He relied on his enthusiastic but gentle interviewing style to ________________, in rich detail, the experiences and thoughts of ordinary Americans and helped establish oral history as an important historical genre.

1 voluble ...... educe
2 loquacious ...... elicit
3 conservative ...... reestablish
4 heterodoxical ...... evince
5 capricious .... bring out

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end of section

SECTION 2 : DILR

DIRECTIONS *for questions 1 to 4:* Answer these questions on the basis of the information given below.

Philip was studying the literacy rate of ten districts – District 1 through District 10. He wrote down, in a table, the data regarding the population of each district and the number of literates in each district. However, when tabulating the data, if the population of a district was at least 20,000, he wrote the population in thousands and if the population of a district was less than 20,000, he wrote the population in hundreds. He applied the same rule for writing the number of literates as well.

The literacy rate of any district is defined as the number of literates in the district as a percentage of the population of that district. The literacy rate of any district cannot be more than 100%.
He made the following table using the above rules:

District	Population	Number of Literates
District 1	1560	280
District 2	150	180
District 3	1240	380
District 4	180	195
District 5	1210	480
District 6	560	350
District 7	100	150
District 8	190	150
District 9	1100	620
District 10	195	198

Q1. DIRECTIONS *for question 1:* Type in your answer in the input box provided below the question.
How many districts have less than 180,000 literates?

Q2. DIRECTIONS *for questions 2 and 3:* Select the correct alternative from the given choices.
Among the districts that have a literacy rate of at least 10% and at most 70%, which district has the sixth highest number of literates?

a) District 6
b) District 10
c) District 7
d) Cannot be determined

Q3. DIRECTIONS *for questions 2 and 3:* Select the correct alternative from the given choices.
If the number of literates in District 2 was the least, what is the least literacy rate of any district approximately?

a) 12%
b) 7.89%
c) 10.15%
d) 10.83%

Q4. DIRECTIONS *for question 4:* Type in your answer in the input box provided below the question.
The total number of literates across all the ten districts is at least

DIRECTIONS *for questions 5 to 8:* Answer these questions on the basis of the information given below.
The coach of a basketball team picks six players for any tournament from out of eleven players available – A through K. Among these eleven players, there are five types of players – Point Guards, Point Forwards, Shooting Guards, Small Forwards and Centres – such that there are exactly three Point Guards, two Point Forwards, two Shooting Guards, two Small Forwards and two Centres. The coach picks the six players such that any team contains exactly two Point Guards, one Point Forward, one Shooting Guard, one Small Forward and one Centre. The coach picked the following teams for different tournaments:

Team 1	A B D G H I
Team 2	A C E F G I
Team 3	D E F H I J
Team 4	B C E G J K

Q5. DIRECTIONS *for questions 5 to 8:* Select the correct alternative from the given choices.
Who among the following is a Point Guard?

a) A
b) E
c) B
d) Cannot be determined

Q6. DIRECTIONS *for questions 5 to 8:* Select the correct alternative from the given choices.
Which of the following pairs of players are definitely of the same type?

a) A and J
b) C and D
c) A and K
d) None of the above

Q7. DIRECTIONS *for questions 5 to 8:* Select the correct alternative from the given choices.
If B is a Shooting Guard and H is a Small Forward, who among the following is a Centre?

a) C
b) E
c) F
d) None of the above

Q8. DIRECTIONS *for questions 5 to 8:* Select the correct alternative from the given choices.
If one of the two Centres was picked in three of the four teams, who among the following is a Centre?

a) E
b) A
c) K
d) B

DIRECTIONS *for questions 9 to 12:* Answer these questions on the basis of the information given below.
Seven persons – A through G – were standing in a queue, one behind the other, not necessarily in the same order. Among these seven persons, five persons were males and the other two were females. Further, four of them were engineers and three of them were doctors.
It is known that

1 no two doctors were standing next to each other and there was at least one female engineer and one female doctor.

2 G, a male doctor, was standing immediately behind a female, while C, who is a male, is standing immediately in front of a female engineer.

3 E, who was not standing immediately in front of an engineer, was standing immediately behind F, who is a doctor, while C was standing behind at least two doctors.

4 B is standing in front of D and there is exactly one doctor, one engineer and one female standing between the two of them.

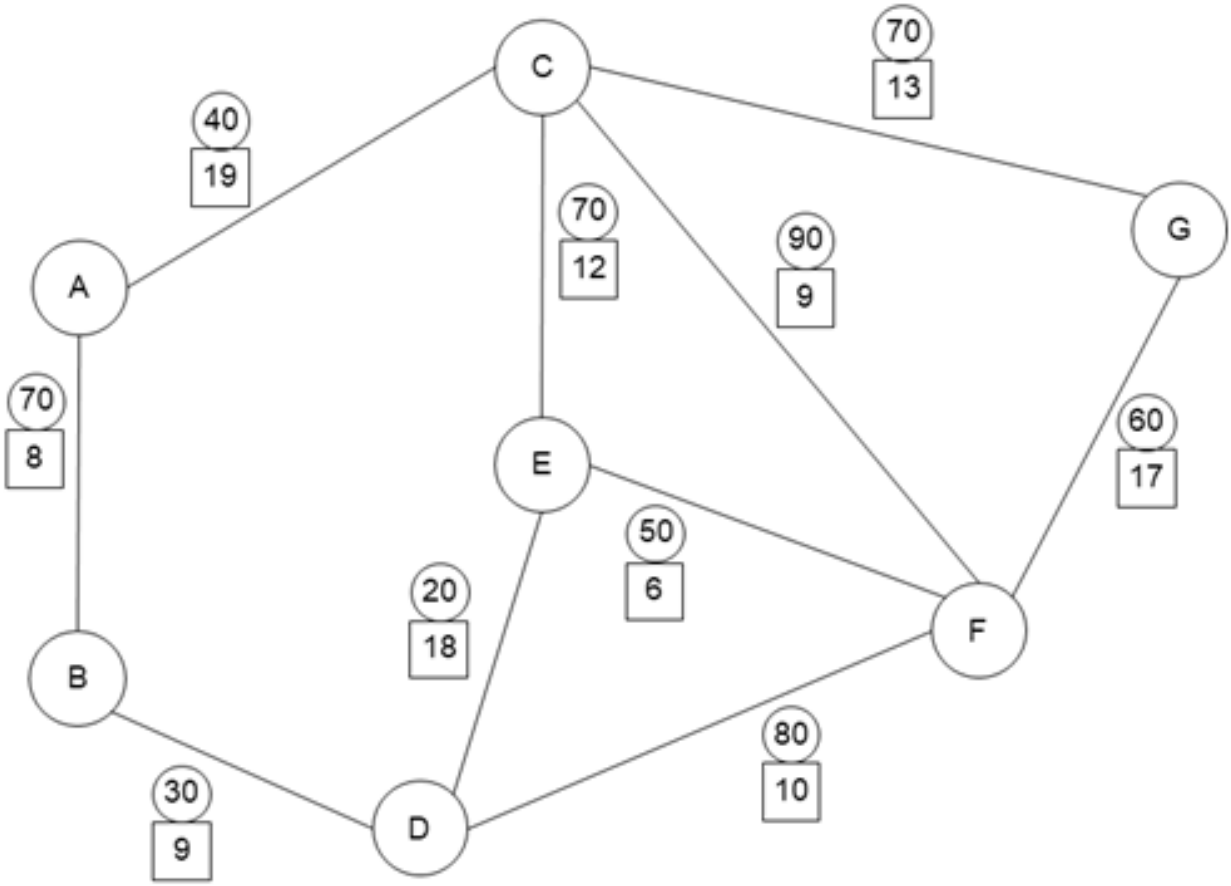
Q9. DIRECTIONS *for question 9:* Type in your answer in the input box provided below the question.
How many persons are standing behind F?

Q10. DIRECTIONS *for question 10:* Select the correct alternative from the given choices.
Who among the following is a female engineer?

Q11. DIRECTIONS *for question 11:* Type in your answer in the input box provided below the question.
What is the maximum number of persons standing between any two doctors of the same gender?

Q12. DIRECTIONS *for question 12:* Select the correct alternative from the given choices.
Who among the following is standing immediately next to a female doctor?

DIRECTIONS *for questions 13 to 16:* Answer these questions on the basis of the information given below.
Seven cities – A through G – are connected by a few two-way roads, as shown below. To travel along any road directly connecting any two cities, a person has to pay a toll. In the figure below, the length of each road (in km) is indicated by the number inside the square adjacent to the road and the toll (in Rs.) that a person has to pay for travelling along that road is indicated by the number inside the circle (given above the square).



Q13. DIRECTIONS *for question 13:* Type in your answer in the input box provided below the question.
What is the minimum possible amount (in Rs.) that a person must pay as toll for travelling from B to G?

Q14. DIRECTIONS *for questions 14 to 16:* Select the correct alternative from the given choices.
If a person travelled from A to F, what is the minimum distance (in km) that he would have travelled?

a) 26
b) 27
c) 28
d) None of the above

Q15. DIRECTIONS *for questions 14 to 16:* Select the correct alternative from the given choices.
The *Expenditure per km* for any route is defined as the ratio of the total tolls paid for travelling on that route to the total distance travelled along that route. If a person travelled from A to G such that he visited each of the seven cities exactly once and did not travel along the same road more than once, approximately what can be his minimum Expenditure per km (in Rs../km)?

a) 6.38
b) 5.24
c) 4.66
d) 3.81

Q16. DIRECTIONS *for questions 14 to 16:* Select the correct alternative from the given choices.
A person, who is at A, has enough fuel in his car to travel for 31 km and has exactly Rs.120 with him. If he reached city X, which is one of the other six cites, without purchasing any additional fuel, how many of the other six cities can be X?

a) 5
b) 4
c) 3
d) 2

DIRECTIONS *for questions 17 to 20:* Answer these questions on the basis of the information given below.
Hari was studying the revenues of a company across different years. For each year, he calculated the following parameters for that company:

1 First Level Differential Revenue (DR1) = (Revenue in a particular year) – (Revenue in the previous year)

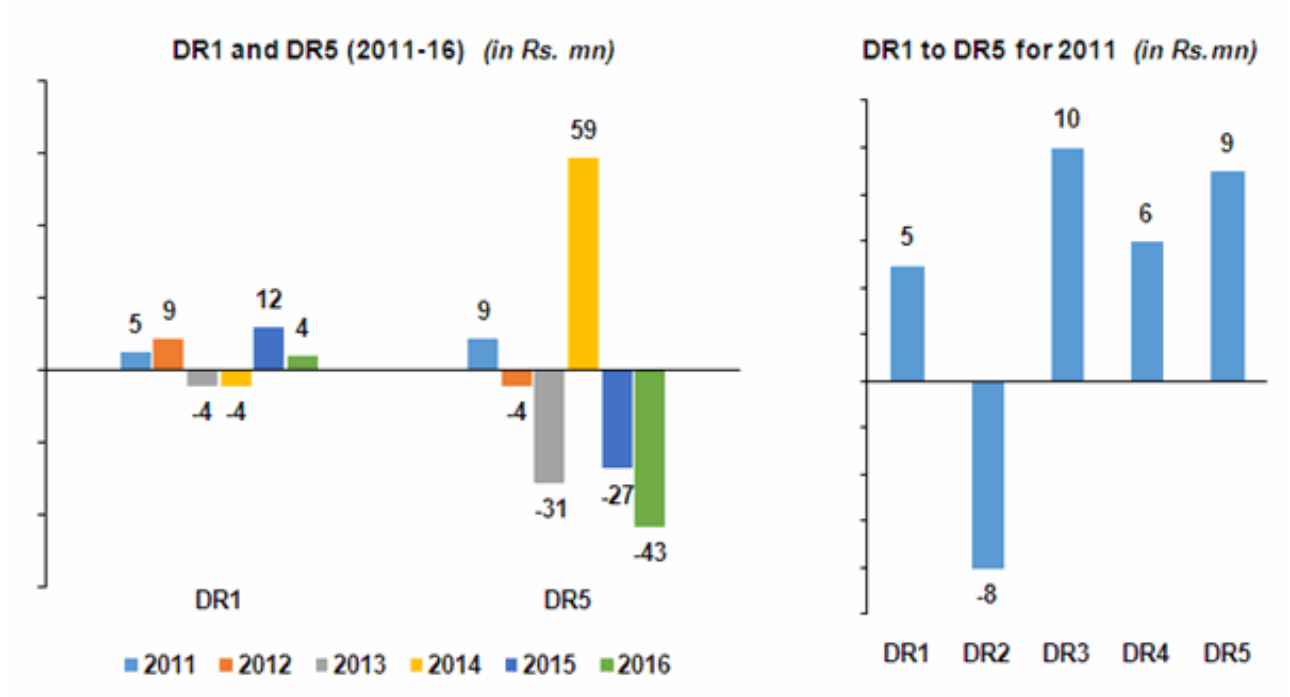
2 Second Level Differential Revenue (DR2) = DR1 of a year – DR1 of the previous year

3 Third Level Differential Revenue (DR3) = DR2 of a year – DR2 of the previous year

4 Fourth Level Differential Revenue (DR4) = DR3 of a year – DR3 of the previous year

5 Fifth Level Differential Revenue (DR5) = DR4 of a year – DR4 of the previous year

He plotted two graphs shown below. The first graph provides the values of DR1 and DR5 for each year from 2011 to 2016. The second graph provides the values of DR1, DR2, DR3, DR4 and DR5 for the year 2011. It is also known that the revenue of the company in 2016 was Rs.254 mn.



Q17. DIRECTIONS *for questions 17 to 20:* Select the correct alternative from the given choices.

What is the average revenue (in Rs. mn) of the company per year from 2006 to 2010?

a) 153.6
b) 145.5
c) 165.4
d) Cannot be determined

Q18. DIRECTIONS *for questions 17 to 20:* Select the correct alternative from the given choices.

If DR5 of the company in 2010 is Rs.5 mn, what is the revenue of the company in 2004?

a) Rs.43 mn
b) Rs.48 mn
c) Rs.53 mn
d) Cannot be determined

Q19. DIRECTIONS *for questions 17 to 20:* Select the correct alternative from the given choices.
If, in 2006, the value of DR1, DR2, DR3, DR4 and DR5 are the same, then which of the following is definitely true?

a) The revenue of the company remained constant for each year from 1999 to 2004.
b) The revenue of the company remained constant for each year from 2001 to 2005.
c) The DR1 of the company remained constant for each year from 2001 to 2004.
d) The DR2 of the company remained constant for each year from 2004 to 2006.

Q20. DIRECTIONS *for questions 17 to 20:* Select the correct alternative from the given choices.
If the revenue of the company was non-negative in each year, which of the following is true of DR5 in 2010?

a) It has a maximum value of Rs.-68 mn.
b) It has a minimum value of Rs.-68 mn.
c) It has a maximum value of Rs.58 mn.
d) It has a minimum value of Rs.58 mn.

DIRECTIONS *for questions 21 to 24:* Answer these questions on the basis of the information given below.
Lalit wanted to purchase a smart phone and he shortlisted five models – Paper, Sheet, Scroll, Leaf and Flat. He ranked the models on five parameters – Screen Size, Processor Speed, Front Camera, Rear Camera and Battery Life. In each parameter, he ranked the five models from 1 to 5 such that a better model was given a numerically lower rank as compared to a worse model. No two models received the same rank in any parameter.
The following information is known about the ranks of each model in each parameter:
1 Each model was ranked third in at least one parameter and exactly two models were not ranked first in any parameter.

2 No model received the same rank in more than two parameters, while Leaf did not receive the same rank in any two parameters.

3 Scroll was ranked better in Processor Speed than at least three models, while Sheet was ranked neither first nor last in Battery Life.

4 Leaf was ranked worse than Scroll in all the parameters except Rear Camera, while Sheet was ranked better than Scroll in Screen Size.

5 Flat, which was ranked fifth in Rear Camera, was ranked better than Scroll and Sheet in Screen Size and in Front Camera but was not ranked first in either of the two parameters.

6 Flat was ranked fourth in Processor Speed, while Sheet was ranked second in two parameters.

Q21. DIRECTIONS *for questions 21 to 24:* Select the correct alternative from the given choices.
Which model was ranked fourth in Battery Life?

a) Sheet
b) Scroll
c) Paper
d) Flat

Q22. DIRECTIONS *for questions 21 to 24:* Select the correct alternative from the given choices.
How many models were ranked better than Scroll in Front Camera?

a) 0
b) 1
c) 2
d) More than 2

Q23. DIRECTIONS *for questions 21 to 24:* Select the correct alternative from the given choices.
Which model has the same rank in Rear Camera as that of Scroll in Front Camera?

a) Scroll
b) Sheet
c) Leaf
d) Paper

Q24. DIRECTIONS *for questions 21 to 24:* Select the correct alternative from the given choices.
If Lalit purchases the model for which the sum of the ranks across the five parameters is the minimum, which model will he purchase?

a) Paper
b) Sheet
c) Scroll
d) Flat
———————————————————————————————— end of section

SECTION :3 QA

Q1. DIRECTIONS *for questions 1 to 6:* Select the correct alternative from the given choices.
If x and y are integers, the equation $5x + 6y = 138$ has

a) no solution for $x < 100$ and $y < 0$.
b) no solution for $x > 150$ and $y > -120$.
c) a solution for $-36 < x < -30$.

d) a solution for $43 < y < 70$.

Q2. DIRECTIONS *for questions 1 to 6:* Select the correct alternative from the given choices.
If the expressions $a1 - 2a2$, $2a2 - 3a3$, $3a3 - 4a4$ and $4a4 - a1$ are in arithmetic progression, what is the ratio of $a1$ and $a2$?

a) 2 : 1
b) 4 : 1
c) 8 : 1
d) Cannot be determined

Q3. DIRECTIONS *for questions 1 to 6:* Select the correct alternative from the given choices.
Rohan and Sohan together completed a task in a certain number of days. Had each of them worked independently on the task, they would have taken d more days and $\frac{16}{9}$ d more days respectively. If they received a total of Rs. 7000 for completing the work, what is Rohan's share?

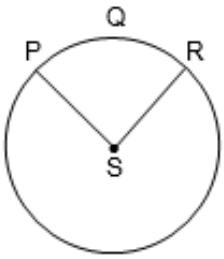
a) Rs.3000
b) Rs.4200
c) Rs.4000
d) Rs.3500

Q4. DIRECTIONS *for questions 1 to 6:* Select the correct alternative from the given choices.
A change dispensing machine contains one-rupee, two-rupee and five-rupee coins. The total number of coins in the machine is 200. The total amount in the machine adds up to Rs.450. If the number of one-rupee and two-rupee coins are interchanged, the total amount comes down to Rs.325. The number of five-rupee coins in the machine is

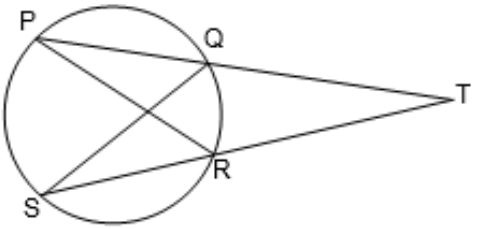
a) 25.
b) 20.
c) 30.
d) 15.

Q5. DIRECTIONS *for questions 1 to 6:* Select the correct alternative from the given choices.
Which of the following statements are definitely false?

I. In the figure below, P, Q and R are points on the circle with centre S and the quadrilateral PQRS is a cyclic quadrilateral.



II. In the figure below, PQ and RS are two chords of a circle which, when extended, intersect each other at T, and triangles RPT and QST are similar.



a) Only I
b) Only II
c) Both I and II
d) Neither I nor II

Q6. DIRECTIONS *for questions 1 to 6:* Select the correct alternative from the given choices.
The average age of a family of seven members, including Bunti and Babli, aged 70 years and 63 years respectively, on January 1st 1986 was 33 years. N years later, Bunti died on his birthday and Mona was born on the same day. A few years after that, Babli died on her birthday and Rohan was born on the same day. N more years after that, on January 1st 2007, Raj was born. What was the average age of the family of eight members on January 1st 2008?

a) 28 years
b) 32 years
c) 33 years
d) 29 years

Q7. DIRECTIONS *for question 7:* Type in your answer in the input box provided below the question.
There is a 5 × 5 square grid, with each of its cells having a distinct identity. In how many ways can three identical coins be placed in the grid (with at most one coin in each cell) such that no two coins are placed either in the same row or in the same column?

Q8. DIRECTIONS *for questions 8 and 9:* Select the correct alternative from the given choices.
What is the remainder when 550 is divided by 13?

a) 12
b) 8
c) 5
d) 1

Q9. DIRECTIONS *for questions 8 and 9:* Select the correct alternative from the given choices.
Bhagat and Chandu start simultaneously from village X to village Y, with their respective speeds in the ratio of 3 : 2. After travelling one-fourth of the total distance, Chandu triples his speed and travels for some more time, following which, he again changes his speed and completes the rest of the journey. Bhagat, however maintains his initial speed throughout the journey. If both Bhagat and Chandu reach the village Y at the same time, and the time for which Chandu travelled at thrice his initial speed was one-third of his total time of travel, then find the ratio of the respective speeds with which Bhagat and Chandu reach the village Y.

a) 24 : 7
b) 18 : 7
c) 7 : 2
d) 3 : 2

Q10. DIRECTIONS *for question 10:* Type in your answer in the input box provided below the question.
The shortest median of a right-angled triangle is 25 units. If the area of the triangle is 336 sq.units, and the length (in units) of the longest median of the triangle is $\sqrt{m}$, find m.

Q11. DIRECTIONS *for question 11:* Select the correct alternative from the given choices.
Indian Airlines has a certain free luggage allowance for each passenger. It charges for excess luggage at a fixed rate per kg. Two passengers, Mohan and Sohan, have a total of 50 kg of luggage between them. They were charged Rs.2800 and Rs.1400 respectively for excess luggage. If the free luggage allowance were halved and the entire luggage belonged to one of them, the excess luggage charge would have been Rs.6300. Find the weight (in kg) of Mohan's luggage.

a) 40
b) 25
c) 30
d) 35

Q12. DIRECTIONS *for questions 12 to 14:* Type in your answer in the input box provided below the question.
Let N = 233 × 321. How many positive divisors of N2 are less than N but do not divide N?

Q13. DIRECTIONS *for questions 12 to 14:* Type in your answer in the input box provided below the question.
X is a set of the first eight consecutive natural numbers. Find the number of ways in which a subset, Y, of X can be formed such that the sum of the elements of Y is divisible by 3?

Q14. DIRECTIONS *for questions 12 to 14:* Type in your answer in the input box provided below the question.
A, B, C and D are four integers having a sum of 4. If the minimum possible value of the sum of their reciprocals is R, find the value of the product 210 × R.

Q15. DIRECTIONS *for questions 15 to 18:* Select the correct alternative from the given choices.
If a, b and c are in arithmetic progression, then the equation $ax + by + c = 0$

a) represents a family of straight lines, each of which is at a distance of 5 units from the origin.
b) represents a family of straight lines, all of which intersect at a point P, which is at a distance of 5 units from the origin.
c) represents a family of straight lines, each of which is at a distance of $\sqrt{5}$ units from the origin.
d) represents a family of straight lines, all of which intersect at a point P, which is at a distance of $\sqrt{5}$ units from the origin.

Q16. DIRECTIONS *for questions 15 to 18:* Select the correct alternative from the given choices.
Some chocolates were distributed equally among a few children and three chocolates were left. Had there been four times the number of children, then ten chocolates would have been left. Find the number of children.

a) 6
b) 7
c) 14
d) Cannot be determined

Q17. DIRECTIONS *for questions 15 to 18:* Select the correct alternative from the given choices.
Four-fifths of a number exceeds the square of the number by as much as that by which the cube of the number exceeds four-fifteenths of the square of the number. How many such numbers lie in the interval [–1, 1]?

a) 0
b) 1
c) 2
d) 3

Q18. DIRECTIONS *for questions 15 to 18:* Select the correct alternative from the given choices.
If $g(xy) = g(x) + g(y) - 2$, $g(2) = a$ and $g(3) = b$, then the value of $g(72) =$

a) $3a + 2b - 8$
b) $2a + 2b - 6$
c) $3a + 3b - 8$
d) $2a + 3b - 8$

Q19. DIRECTIONS *for question 19:* Type in your answer in the input box provided below the question.
If the sum of 101 distinct terms in arithmetic progression is zero, in how many ways can three of these terms be selected such that their sum is zero?

Q20. DIRECTIONS *for questions 20 and 21:* Select the correct alternative from the given choices.
A hexagon is inscribed in a circle of radius 14 cm. If three of the sides of the hexagon are 22 cm each and the other three sides are all equal, find the length of each of the other three sides.

a) 4 cm
b) 6 cm
c) 8 cm
d) 7 cm

Q21. DIRECTIONS *for questions 20 and 21:* Select the correct alternative from the given choices.

Find the maximum possible value of the product xy, where x is given by the solution to the equation $|x + 3| = 4$ and y is given by $y = 7 - |x - 2|$.

a) 7
b) 49
c) 6
d) 14

Q22. DIRECTIONS *for questions 22 and 23:* Type in your answer in the input box provided below the question.
A group of boys met in a playground and pooled some marbles in a bag, such that each boy contributed exactly two marbles more than the number of boys in the group. One of the boys responsible for the safe keeping of the marbles then took the bag home. After reaching home, he opened the bag to count the number of marbles and found that there were exactly 288 marbles and also realized that the bag had a hole in it. Just as he was wondering if any marbles had fallen out of the hole on his way home, his friend arrives and confirms that he had found a couple of marbles that had fallen out of the bag on the way. Find the minimum number of marbles that could have fallen out of the bag.

Q23. DIRECTIONS *for questions 22 and 23:* Type in your answer in the input box provided below the question.
N marbles can be distributed equally among P children, where $N > P$. What is the number of values that N can assume such that $P > 1$ and $2 < N + P < 100$?

Q24. DIRECTIONS *for question 24:* Select the correct alternative from the given choices.
A trader sells cakes in economy packs of four cakes per pack, each pack being charged at the listed price of three cakes. For every set of five such packs bought by a customer, the trader gives him one extra cake as a free gift. If a customer buys 12 economy packs, what is the effective percentage of discount that he gets?

a) $35\frac{2}{7}\%$
b) $28\frac{4}{7}\%$
c) $38\frac{8}{9}\%$

d) 28%

Q25. DIRECTIONS *for questions 25 and 26:* Type in your answer in the input box provided below the question.
A circular pizza is cut into four identical pieces (or quadrants) with two diametrical cuts made perpendicular to each other. Each piece can be topped with any one of five available toppings but no two adjacent pieces have the same topping. In how many ways can the four pieces be topped?

Q26. DIRECTIONS *for questions 25 and 26:* Type in your answer in the input box provided below the question.
Consider a natural number $m \times (m > 2)$ and $n = 2m + 1$. Let X be the sum of the two-digit numbers as shown below (each two-digit number written in the number system to the base n):
X = (12)n + (34)n + …… ([$2m$ – 1] [$2m$])n
Express X + m + 2 in base m.

Q27. DIRECTIONS *for questions 27 and 28:* Select the correct alternative from the given choices.
On a certain sum, the difference between the compound interest and the simple interest for the second year is Rs.3,600 and the same for the third year is Rs.7,740. What is the sum? Assume that in case of compound interest, compounding is done annually.

a) Rs.1,60,000
b) Rs.1,20,000
c) Rs.1,80,000
d) Cannot be determined

Q28. DIRECTIONS *for questions 27 and 28:* Select the correct alternative from the given choices.
In a game show, a contestant is given three boxes and asked to choose one of them. Only one of the three boxes contains a prize. After the contestant chooses one of the boxes, the host opens that box. If that box contains the prize, the contestant wins it. Else, the host allows the contestant a last chance to choose one of the two remaining boxes. What is the probability that the contestant wins the prize?

a) $\frac{1}{3}$
b) $\frac{1}{2}$

c) $\frac{5}{6}$

d) $\frac{2}{3}$