

# MBA ADMISSION TEST

## Model Question Paper

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### INSTRUCTIONS TO CANDIDATES

Sub-test	I	-	<b>ENGLISH</b> 60 questions
Sub-test	II	-	<b>QUANTITATIVE ANALYSIS &amp; LOGICAL REASONING</b> 30 questions
Sub-test	III	-	<b>APTITUDE TEST</b> 30 questions

Total Questions = 120

Total time: 2 hours and 15 minutes

1. You are required to write your (i) Applicant Id and (ii) Question Paper Code no. and SHADE THE NUMERALS appropriately in the space provided on the RESPONSE SHEET. You are also required to write the (iii) Room number and (iv) Test Date in the space provided separately.
  2. Choose the correct answer from the Question Paper and SHADE THE CORRECT RESPONSE viz., A, B, C, D or E. Only one response must be clearly shaded for each question. More than one entry, unclear entries or wrong entries will **ATTRACT NEGATIVE MARKS**.
  3. Use of electronic calculator is strictly not permitted.
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# SUB TEST – I

## ENGLISH

**Instructions:** Each question, 1 through 60, is followed by 5 answers – A through E. Indicate your correct answer by shading the appropriate choice viz., A, B, C, D or E, provided against each question number in the RESPONSE SHEET.

Max. Marks: 60 x 1: 60

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### SAMPLE QUESTIONS

**DIRECTIONS:** Each of the five passages given below is followed by questions. Choose the best answer of each question.

#### PASSAGE I

The current debate on intellectual property rights (IPRs) raises a number of important issues concerning the strategy and policies for building a more dynamic national agricultural research system, the relative roles of public and private sectors, and the role of agribusiness multinational corporations (MNCs). This debate has been stimulated by the international agreement on Trade Related Intellectual Property Rights (TRIPs), negotiated as part of the Uruguay Round. TRIPs, for the first time, seeks to bring innovations in agricultural technology under a new worldwide IPR regime. The agribusiness MNCs (along with pharmaceutical companies) played a leading part in lobbying for such a regime during the Uruguay Round negotiations. The argument was that incentives are necessary to stimulate innovations, and that this calls for a system of patents which gives innovators the sole right to use (or sell/lease the right to use) their innovations for a specified period and protects them against unauthorised copying or use. With strong support of their national governments, they were influential in shaping the agreement on TRIPs, which eventually emerged from the Uruguay Round.

The current debate on TRIPs in India-as indeed elsewhere-echoes wider concerns about privatization “of research and allowing a free field for MNCs in the sphere of biotechnology and agriculture. The agribusiness corporations, and those with unbounded faith in the power of science to overcome all likely problems, point to the vast potential that new technology holds for solving the problems of hunger, malnutrition and poverty in the world. The exploitation of this potential should be encouraged and this is best done by the private sector for which patents are essential. Some, who do not necessarily accept this optimism, argue that fears of MNC domination are exaggerated and that farmers will accept their products only if they decisively outperform the available alternatives. Those who argue against agreeing to introduce an IPR regime in agriculture and encouraging private sector research are apprehensive that this will work to the disadvantage of farmers by making them more and more dependent on monopolistic MNCs. A different, though related apprehension is that extensive use of hybrids and genetically engineered new varieties might increase the vulnerability of agriculture to outbreaks of pests and diseases. The larger, longer-term consequences of reduced biodiversity that may follow from the use of specially bred varieties are also another cause for concern. Moreover, corporations, driven by the profit motive, will necessarily tend to underplay, if not ignore, potential adverse consequences, especially those which are unknown and which may manifest themselves only over a relatively long period. On the other hand, high-pressure advertising and aggressive sales campaigns by private companies can seduce farmers into accepting varieties without being aware of potential adverse effects and the possibility of disastrous consequences for their livelihood if these varieties happen to fail. There is no provision under the laws, as they now exist, for compensating users against such eventualities.

Excessive preoccupation with seeds and seed material has obscured other important issues involved in reviewing the research policy. We need to remind ourselves that improved varieties by themselves are not sufficient for sustained growth of yields. In our own experience, some of the early high yielding varieties (HYVs) of rice and wheat were found susceptible to widespread pest attacks; and some had problems of grain

quality. Further research was necessary to solve these problems. This largely successful research was almost entirely done in public research institutions. Of course, it could in principle have been done by private companies, but whether they choose to do so depends crucially on the extent of the loss in market for their original introductions on account of the above factors and whether the companies are financially strong enough to absorb the “losses”, invest in research to correct the deficiencies and recover the lost market. Public research, which is not driven by profit, is better placed to take corrective action. Research for improving common pool resource management, maintaining ecological health and ensuring sustainability is both critical and also demanding in terms of technological challenge and resource requirements. As such research is crucial to the impact of new varieties, chemicals and equipment in the farmer’s field, private companies should be interested in such research. But their primary interest is in the sale of seed material, chemicals, equipment and other inputs produced by them. Knowledge and techniques for resource management are not “marketable” in the same way as those inputs. Their application to land, water and forests has a long gestation and their efficacy depends on resolving difficult problems such as designing institutions for proper and equitable management of common pool resources. Public or quasi-public research institutions informed by broader, long-term concerns can only do such work. The public sector must therefore continue to play a major role in the national research system. It is both wrong and misleading to pose the problem in terms of public sector versus private sector or of privatisation of research. We need to address problems likely to arise on account of the public-private sector complementarity, and ensure that the public research system performs efficiently. Complementarity between various elements of research raises several issues in implementing an IPR regime. Private companies do not produce new varieties and inputs entirely as a result of their own research. Almost all technological improvement is based on knowledge and experience accumulated from the past, and the results of basic and applied research in public and quasi-public institutions (universities, research organisations). Moreover, as is increasingly recognised, accumulated stock of knowledge does not reside only in the scientific community and its academic publications, but is also widely diffused in traditions and folk knowledge of local communities all over.

The deciphering of the structure and functioning of DNA forms the basis of much of modern biotechnology. But this fundamental breakthrough is a „public good“ freely accessible in the public domain and usable free of any charge. Varieties/techniques developed using that knowledge can however be, and are, patented for private profit. Similarly, private corporations draw extensively, and without any charge, on germ plasm available in varieties of plants species (neem and turmeric are by now famous examples). Publicly funded gene banks as well as new varieties bred by public sector research stations can also be used freely by private enterprises for developing their own varieties and seek patent protection for them. Should private breeders be allowed free use of basic scientific discoveries? Should the repositories of traditional knowledge and germ plasm be collected which are maintained and improved by publicly funded institutions? Or should users be made to pay for such use? If they are to pay, what should be the basis of compensation? Should the compensation be for individuals or for communities/institutions to which they belong? Should individuals/institutions be given the right of patenting their innovations? These are some of the important issues that deserve more attention than they now get and need serious detailed study to evolve reasonably satisfactory, fair and workable solutions. Finally, the tendency to equate the public sector with the government is wrong. The public space is much wider than government departments and includes co-operatives, universities, public trust and a variety of nongovernmental organisations (NGOs). Giving greater autonomy to research organisations from government control and giving non-government public institutions the space and resources to play a larger, more effective role in research, is therefore an issue of direct relevance in restructuring the public research system.

1. *Which one of the following statements describes an important issue, or important issues, not being raised in the context of the current debate on IPRs?*
  - (A) The role of MNCs in the sphere of biotechnology and agriculture.
  - (B) The strategy and policies for establishing an IPR regime for Indian agriculture.
  - (C) The relative roles of public and private sectors.
  - (D) Wider concerns about “privatisation” of research.

- (E) None of these
2. *The fundamental breakthrough in deciphering the structure and functioning of DNA has become a public good. This means that*
- (A) breakthroughs in fundamental research on DNA are accessible by all without any monetary considerations.
  - (B) the fundamental research on DNA has the characteristic of having beneficial effects for the public at large.
  - (C) due to the large scale of fundamental research on DNA, it falls in the domain of public sector research institutions.
  - (D) the public and other companies must have free access to such fundamental breakthroughs in research.
  - (E) None of these
3. *In debating the respective roles of the public and private sectors in the national research system, it is important to recognise*
- (A) that private companies do not produce new varieties and inputs entirely on their own research.
  - (B) that almost all technological improvements are based on knowledge and experience accumulated from the past.
  - (C) the complementary role of public-and private-sector research.
  - (D) that knowledge repositories are primarily the scientific community and its academic publications.
  - (E) None of these
4. *Which one of the following may provide incentives to address the problem of potential adverse consequences of biotechnology?*
- (A) Include IPR issues in the TRIPs agreement.
  - (B) Nationalise MNCs engaged in private research in biotechnology.
  - (C) Encourage domestic firms to patent their innovations.
  - (D) Make provisions in the law for user compensation against failure of newly developed varieties.
  - (E) None of these
5. *Which of the following statements is not a likely consequence of emerging technologies in agriculture?*
- (A) Development of newer and newer varieties will lead to increase in biodiversity.
  - (B) MNCs may underplay the negative consequences of the newer technology on environment.
  - (C) Newer varieties of seeds may increase vulnerability of crops to pests and diseases.
  - (D) Reforms in patent laws and user compensation against crop failures would be needed to address new technology problems.
  - (E) None of these
6. *The TRIPs agreement emerged from the Uruguay Round to*
- (A) address the problem of adverse consequences of genetically engineered new varieties of grain.
  - (B) fulfil the WTO requirement to have an agreement on trade related property rights.
  - (C) provide incentives to innovators by way of protecting their intellectual property.
  - (D) give credibility to the innovations made by MNCs in the field of pharmaceuticals and agriculture.
  - (E) None of these

7. *Public or quasi-public research institutions are more likely than private companies to address the negative consequences of new technologies, because of which of the following reasons?*
- (A) Public research is not driven by profit motive.
  - (B) Private companies may not be able to absorb losses arising out of the negative effects of the new technologies.
  - (C) Unlike new technology products, knowledge and techniques for resource management are not amenable to simple market transactions.
  - (D) All of the above.
  - (E) None of these
8. *While developing a strategy and policies for building a more dynamic national agricultural research system, which one of the following statements needs to be considered?*
- (A) Public and quasi-public institutions are not interested in making profits.
  - (B) Public and quasi-public institutions have a broader and long-term outlook than private companies.
  - (C) Private companies are incapable of building products based on traditional and folk knowledge.
  - (D) Traditional and folk knowledge cannot be protected by patents.
  - (E) None of these

## PASSAGE II

One of the criteria by which we judge the vitality of a style of painting is its ability to renew itself—its responsiveness to the changing nature and quality of experience, the degree of conceptual and formal innovation that it exhibits. By this criterion, it would appear that the practice of abstractionism has failed to engage creatively with the radical change in human experience in recent decades. It has, seemingly, been unwilling to re-invent itself in relation to the systems of artistic expression and viewers' expectations that have developed under the impact of the mass media.

The judgment that abstractionism has slipped into „inertia gear“ is gaining endorsement, not only among discerning viewers and practitioners of other art forms, but also among abstract painters themselves. Like their companions elsewhere in the world, abstractionists in India are asking themselves an overwhelming question today: Does abstractionism have a future? The major crisis that abstractionists face is that of revitalising their picture surface; few have improvised any solutions beyond the ones that were exhausted by the 1970s. Like all revolutions, whether in politics or in art, abstractionism must now confront its moment of truth: having begun life as a new and radical pictorial approach to experience, it has become an entrenched orthodoxy itself. Indeed, when viewed against a historical situation in which a variety of subversive, interactive and richly hybrid forms are available to the art practitioner, abstractionism assumes the remote and defiant air of an aristocracy that has outlived its age: trammled by formulaic conventions yet buttressed by a rhetoric of sacred mystery, it seems condemned to being the last citadel of the self-regarding 'fine art' tradition, the last hurrah of painting for painting's sake.

The situation is further complicated in India by the circumstances in which an indigenous abstractionism came into prominence here during the 1960s. From the beginning it was propelled by the dialectic between two motives, one revolutionary and the other conservative—it was inaugurated as an act of emancipation from the dogmas of the nascent Indian nation state, when art was officially viewed as an indulgence at worst, and at best, as an instrument for the celebration of the republic's hopes and aspirations. Having rejected these dogmas, the pioneering abstractionists also went on to reject the various figurative styles associated with the Shantiniketan circle and others. In such a situation, abstractionism was a revolutionary move. It led art towards the exploration of the subconscious mind, the spiritual quest and the possible expansion of consciousness.

Indian painting entered into a phase of self-inquiry, a meditative inner space where cosmic symbols and nonrepresentational images ruled. Often, the transition from figurative idioms to abstractionist ones took place within the same artist. At the same time, Indian abstractionists have rarely committed themselves wholeheartedly to a nonrepresentational idiom. They have been preoccupied with the fundamentally metaphysical project of aspiring to the mystical-holy without altogether renouncing the symbolic. This has been sustained by a hereditary reluctance to give up the *murti*, the inviolable iconic form, which explains why abstractionism is marked by the conservative tendency to operate with images from the sacred repertoire of the past. Abstractionism thus entered India as a double-edged device in a complex cultural transaction. Ideologically, it served as an internationalist legitimisation of the emerging revolutionary local trends. However, on entry, it was conscripted to serve local artistic preoccupations – a survey of indigenous abstractionism will show that its most obvious points of affinity with European and American abstract art were with the more mystically oriented of the major sources of abstractionist philosophy and practice, for instance the Kandinsky-Klee school. There have been no takers for Malevich's Suprematism, which militantly rejected both the artistic forms of the past and the world of appearances, privileging the new-minted geometric symbol as an autonomous sign of the desire for infinity.

Against this backdrop, we can identify three major abstractionist idioms in Indian art. The first develops from a love of the earth, and assumes the form of a celebration of the self's dissolution in the cosmic panorama; the landscape is no longer a realistic transcription of the scene, but is transformed into a visionary occasion for contemplating the cycles of decay and regeneration. The second idiom phrases its departures from symbolic and archetypal devices as invitations to heightened planes of awareness. Abstractionism begins with the establishment or dissolution of the motif, which can be drawn from diverse sources, including the hieroglyphic tablet, the Sufi meditation dance or the Tantric diagram. The third idiom is based on the lyric play of forms guided by gesture or allied with formal improvisations like the assemblage. Here, sometimes, the line dividing abstract image from patterned design or quasi-random expressive marking may blur. The flux of forms can also be regimented through the poetics of pure colour arrangements, vector-diagrammatic spaces and gestural design. In this genealogy, some pure lines of descent follow their logic to the inevitable point of extinction, others engage in cross-fertilization, and yet others undergo mutation to maintain their energy. However, this genealogical survey demonstrates the wave at its crests, those points where the metaphysical and the painterly have been fused in images of abiding potency, ideas sensuously ordained rather than fabricated programmatically to a concept. It is equally possible to enumerate the thoughts where the two principles do not come together, thus arriving at a very different account. Uncharitable as it may sound, the history of Indian abstractionism records a series of attempts to avoid the risks of abstraction by resorting to an overt and near generic symbolism, which many Indian abstractionists embrace when they find themselves bereft of the imaginative energy to negotiate the union of metaphysics and painterliness. Such symbolism falls into a dual trap: it succumbs to the pompous vacuity of pure metaphysics when the burden of intention is passed off as justification; or then it is desiccated by the arid formalism of pure painterliness, with delight in the measure of chance or pattern guiding the execution of a painting. The ensuing conflict of purpose stalls the progress of abstractionism in an impasse. The remarkable Indian abstractionists are precisely those who have overcome this and addressed themselves to the basic elements of their art with a decisive sense of independence from prior models. In their recent work, we see the logic of Indian abstractionism pushed almost to the furthest it can be taken. Beyond such artists stands a lost generation of abstractionists whose work invokes a wistful, delicate beauty but stops there.

Abstractionism is not a universal language; it is an art that points up the loss of a shared language of signs in society. And yet, it affirms the possibility of its recovery through the effort of awareness. While its rhetoric has always emphasised a call for new forms of attention, abstractionist practice has tended to fall into a complacent pride in its own incomprehensibility; a complacency fatal in an ethos where vibrant new idioms compete for the viewers' attention. Indian abstractionists ought to really return to basics, to reformulate and replenish their understanding of the nature of the relationship between the painted image and the world around it. But will they abandon their favourite conceptual habits and formal conventions, if this becomes necessary?

9. *Which one of the following is not stated by the author as a reason for abstractionism losing its vitality?*
- (A) Abstractionism has failed to reorient itself in the context of changing human experience.
  - (B) Abstractionism has not considered the developments in artistic expression that have taken place in recent times.
  - (C) Abstractionism has not followed the path taken by all revolutions, whether in politics or art.
  - (D) The impact of mass media on viewers' expectations has not been assessed, and responded to, by abstractionism.
  - (E) None of these
10. *Which one of the following, according to the author, is the role that abstractionism plays in a society?*
- (A) It provides an idiom that can be understood by most members in a society.
  - (B) It highlights the absence of a shared language of meaningful symbols which can be recreated through greater awareness.
  - (C) It highlights the contradictory artistic trends of revolution and conservatism that any society needs to move forward.
  - (D) It helps abstractionists invoke the wistful, delicate beauty that may exist in society.
  - (E) None of these
11. *According to the author, which one of the following characterises the crisis faced by abstractionism?*
- (A) Abstractionists appear to be unable to transcend the solutions tried out earlier.
  - (B) Abstractionism has allowed itself to be confined by set forms and practices.
  - (C) Abstractionists have been unable to use the multiplicity of forms now becoming available to an artist.
  - (D) All of the above.
  - (E) None of these
12. *According to the author, the introduction of abstractionism was revolutionary because it*
- (A) celebrated the hopes and aspirations of a newly independent nation.
  - (B) provided a new direction to Indian art, towards self-inquiry and non-representational images.
  - (C) managed to obtain internationalist support for the abstractionist agenda.
  - (D) was emancipation from the dogmas of the nascent nation state.
  - (E) None of these
13. *Which one of the following is not part of the author's characterisation of the conservative trend in Indian abstractionism?*
- (A) An exploration of the subconscious mind.
  - (B) A lack of full commitment to non-representational symbols.
  - (C) An adherence to the symbolic while aspiring to the mystical.
  - (D) Usage of the images of gods or similar symbols.
  - (E) None of these
14. *Given the author's delineation to the three abstractionist idioms in Indian art, the third idiom can be best distinguished from the other two idioms through its*
- (A) depiction of nature's cyclical renewal.
  - (B) use of non-representational images.
  - (C) emphasis on arrangement of forms.
  - (D) limited reliance on original models.
  - (E) None of these

15. *According to the author, the attraction of the Kandinsky-Klee school for Indian abstractionist can be explained by which one of the following?*
- (A) The conservative tendency to aspire to the mystical without a complete renunciation of the symbolic.
  - (B) The discomfort of Indian abstractionists with Malevich's Suprematism.
  - (C) The easy identification of obvious points of affinity with European and American abstract art, of which the Kandinsky-Klee school is an example.
  - (D) The double-edged nature of abstractionism which enabled identification with mystically-oriented schools.
  - (E) None of these
16. *Which one of the following, according to the author, is the most important reason for the stalling of abstractionism's progress in an impasse?*
- (A) Some artists have followed their abstractionist logic to the point of extinction.
  - (B) Some artists have allowed chance or pattern to dominate the execution of their paintings.
  - (C) Many artists have avoided the trap of a near-generic and an open symbolism.
  - (D) Many artists have found it difficult to fuse the twin principles of the metaphysical and the painterly.
  - (E) None of these

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## SUB TEST – II

### QUANTITATIVE ANALYSIS & LOGICAL REASONING

**Instructions:** Each question, 61 through 90, is followed by 5 answers – A through E. Indicate your correct answer by shading the appropriate choice viz., A, B, C, D or E, provided against each question number in the RESPONSE SHEET.

Max. Marks: 30 x 2 : 60

**Instructions:** Each question, 61 through 90, is followed by 5 answers – A through E, Indicate your correct choice by shading the appropriate choice viz., A, B, C, D or E, provided against each question number in the RESPONSE SHEET.

#### SAMPLE QUESTIONS

- A cistern normally takes 5 hours to be filled by a tap, but because of a leak, it takes 1 hour more. In how many hours will the leak empty a full cistern?  
A) 8                      B) 6                      C) 12                      D) 20                      E) 30
- A man buys two fans for Rs.700. He sells one at 16% profit and the other at 12% loss. If he neither gains nor loses in the transaction find the cost price of each fan  
A) Rs.350 each                      B) Rs.400 & Rs.300                      C) Rs.300 & Rs.400  
D) Rs.360 & Rs.480                      E) Rs.250 & Rs.450
- The value of  $\left[ \frac{1}{1 + \log_x(yz)} + \frac{1}{1 + \log_y(xz)} + \frac{1}{1 + \log_z(xy)} \right]$  is :  
A)  $\frac{1}{xyz}$                       B)  $xyz$                       C)  $\log xyz$                       D) 1                      E) 0
- A vessel is full of refined oil.  $\frac{1}{4}$ <sup>th</sup> of the refined oil is taken out, and the vessel is filled with mustard oil. If the process is repeated 4 times and 10 litres of refined oil is finally left in the vessel, what is the capacity of the vessel?  
A) 33 litres;                      B)  $\frac{2460}{81}$  litres                      C)  $\frac{2560}{81}$  litres                      D) 30 litres;                      E) none of these
- In a party 70% of the people drank coffee, 65% drank soft drinks, 27% did not drink anything, whereas 248 people drank both. Find the total number of people who attended the party.  
A) 300                      B) 400                      C) 500                      D) 600                      E) None of these
- $a^3 + b^3 + c^3 - 3abc = (a + b + C) \times ?$   
A)  $a^2 + b^2 + c^2 + ab + bc + ca$                       B)  $a^2 + b^2 + c^2 - ab - bc - ca$   
C)  $a^2 + b^2 + c^2$                       D)  $a^2b + b^2c + c^2a$   
E)  $(a+b+c)^2$

7. If  $x$  workers working  $x$  hours a day can do  $x$  units of a work in  $x$  days, then, how many units of work would  $y$  workers, working  $y$  hours per day be able to complete in  $y$  days?
- A)  $\frac{y^3}{x^2}$     B)  $\frac{y^2}{x^2}$     C)  $\frac{x^3}{y^2}$     D)  $\frac{x^2}{y^2}$     E)  $\frac{y^3}{x^3}$
8. The foot of a 30 ft ladder leaning against a wall rests on level ground 18 ft from the base of the wall. The angle of inclination  $\theta$  of the ladder is given by
- A)  $4 \cos \theta = 3$     B)  $4 \sin \theta = 5$     C)  $5 \sin \theta = 4$     D)  $3 \cos \theta = 5$     E) None of these
9. Godrej, a major white goods producer in India, uses a quality check scheme on produced items before they are sent into the market. The plan is as follows: A set of 20 articles is readied and 4 of them are chosen at random. If any of them is found to be defective then the whole set is put under 100% screening again. If no defectives are found, the whole set is sent into the market. Find the probability that a box containing 4 defective articles will be sent into the market?
- A)  $\frac{364}{969}$     B)  $\frac{364}{963}$     C)  $\frac{96}{969}$     D)  $\frac{346}{969}$     E)  $\frac{343}{969}$
10. If A, B, C are any three sets, then  $A \cup (B \cap C)$  is the same as ....
- A)  $(A \cap C) \cup (B \cap C)$     B)  $(A \cup B) \cap (A \cup C)$   
 C)  $(A \cup B) \cap (B \cup C)$     D)  $(A \cap C) \cap (B \cup C)$     E) None of these
11. Find the sum of the following series up to infinite term:
- $$\frac{2}{5} + \frac{3}{5^2} + \frac{2}{5^3} + \frac{3}{5^4} + \frac{2}{5^5} + \frac{3}{5^6} + \dots \infty$$
- A)  $\frac{15}{24}$     B)  $\frac{24}{15}$     C)  $\frac{24}{13}$     D)  $\frac{13}{24}$     E)  $\infty$
12. Persons x, y, z and Q live in red, green, yellow or blue coloured houses placed in a sequence on a street. Z lives in a yellow house. The green house is adjacent to the blue house. X does not live adjacent to z. the yellow house is in between the green and red houses.
- The colour of the house x lives in is:
- A) Red;    B) Green;    C) Blue;    D) Red or Green;    E) cannot be determined
13. A teacher has 6 fruits – 3 oranges, 2 apples and 1 pine apple. Four students – 101, 102, 103 and 104 are lined up one behind the other. The teacher helps them put the fruit on their head so that they cannot see the fruit kept on their head. Student number 101 can see the fruit kept on the heads of 102, 103 and 104. Student 102 can see the fruits kept on 103 and 104's head. 103 can see the fruit kept on 104's head. 104 cannot see any of the fruits, since he is at the front of the line. Now the teacher asks the students to tell the name of the fruit kept on their own heads. None of them could reply.
- Question: What was the fruit on student 104's head?
- A) Orange;    B) Apple;    C) Pineapple;  
 D) Apple or Pineapple;    E) cannot be determined
14. I have a total of Rs. 1,000. Item X costs Rs. 110, item Y costs Rs.90, item Z costs Rs.70, item V costs Rs. 40, and item W costs Rs. 45. For every item V that I purchase, I must also buy only two items of Y. For every item X, I must buy one item of Z. For every item W, I must also buy two of items V, and one of item Y. For every item purchased I earn 1000 points, and for every rupee not spent I earn a

penalty of 1500 points. My objective is to maximize the points I earn. What is the number of items that I must purchase to maximize my points?

- A) 17;      B) 16;      C) 15;      D) 14;      E) 13

16. i) six friends a, b, c, d, e, and f are sitting along the sides of a hexagonal table for playing a game, though not necessarily in the same order.  
ii) f, who is sitting exactly opposite of a, is to the immediate right of b.  
iii) d is between a and b and is exactly opposite to c.

Question: a is sitting between which of the following pairs of persons?

- A) d and e;    B) b and e;    C) b and c;    D) e and c;    E) none of these

17. Half the villagers of a certain village have their own houses. One fifth of the villagers cultivate paddy. One third of the villagers are literate. Four fifths of the villagers are below twenty five. Which one of the following is certainly true.  
A) All the villagers who have their own houses are literate  
B) Some villagers under twenty five are literate  
C) Only a quarter of the villagers who have their own houses cultivate paddy  
D) Only half of the villagers who cultivate paddy are literate  
E) No villagers under twenty five has his own house

18. Rajeev planted some plants in his lawn but in a certain fixed pattern:  
i) In one of the rows there are neither Roses nor Marigolds  
ii) There are two more rows of Orchids than Tulips, and two more rows of Roses than Orchids  
iii) There are four more rows of Roses than Tulips  
iv) There aren't as many rows of Lilly as Fireball  
v) There is one less Marigold row than Rose  
vi) There is just one row of Tulips  
vii) The maximum number of rows he planted is six

Question: How many rows of rose he planted?

- A) Two;      B) Three;      C) Four;      D) Five;      E) cannot be determined

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## SUB TEST – III

### APTITUDE TEST

**Instructions:** Each question, 91 through 120, is followed by 5 answers – A through E. Indicate your correct answer by shading the appropriate choice viz., A, B, C, D or E, provided against each question number in the RESPONSE SHEET.

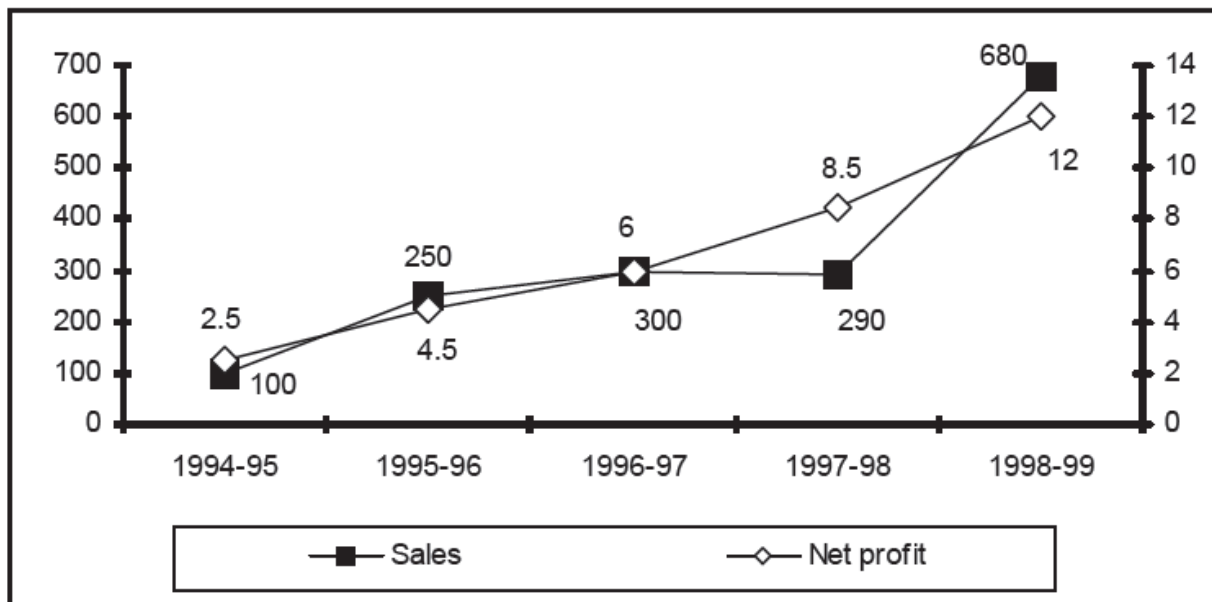
Max. Marks: 30 x 1 : 30

#### SAMPLE QUESTIONS

**Directions for questions 91 to 94:** Answer the questions based on the following information.

The figure below represents sales and net profit in Rs. crore of IVP Ltd. for five years from 1994-95 to 1998-99. During this period the sales increased from ₹100 crore to ₹ 680 crore.

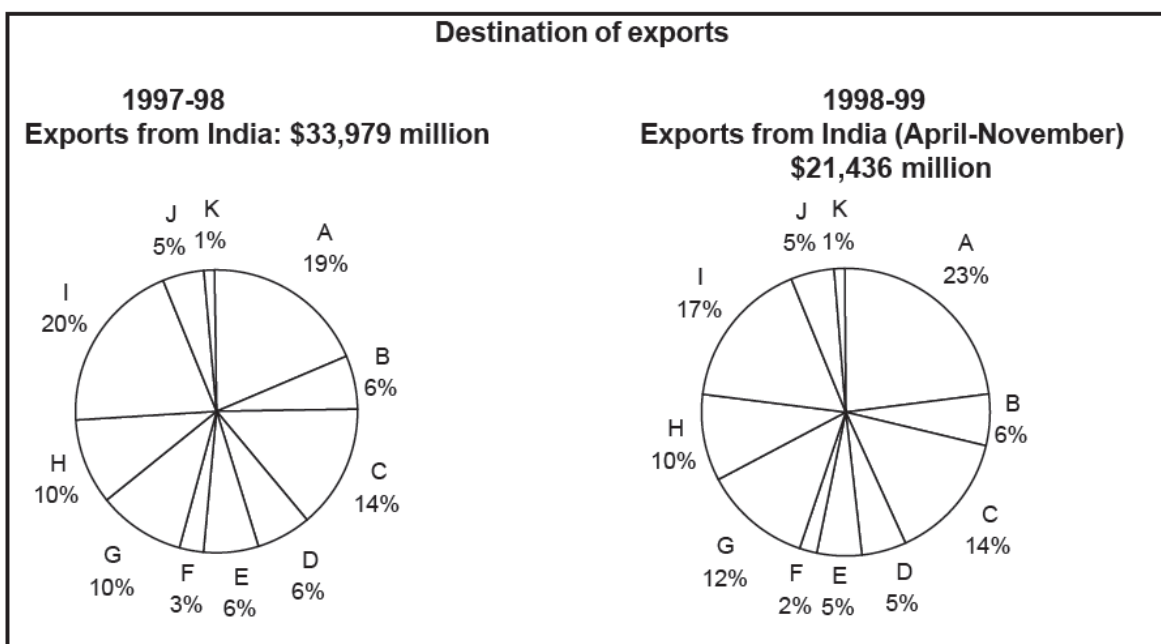
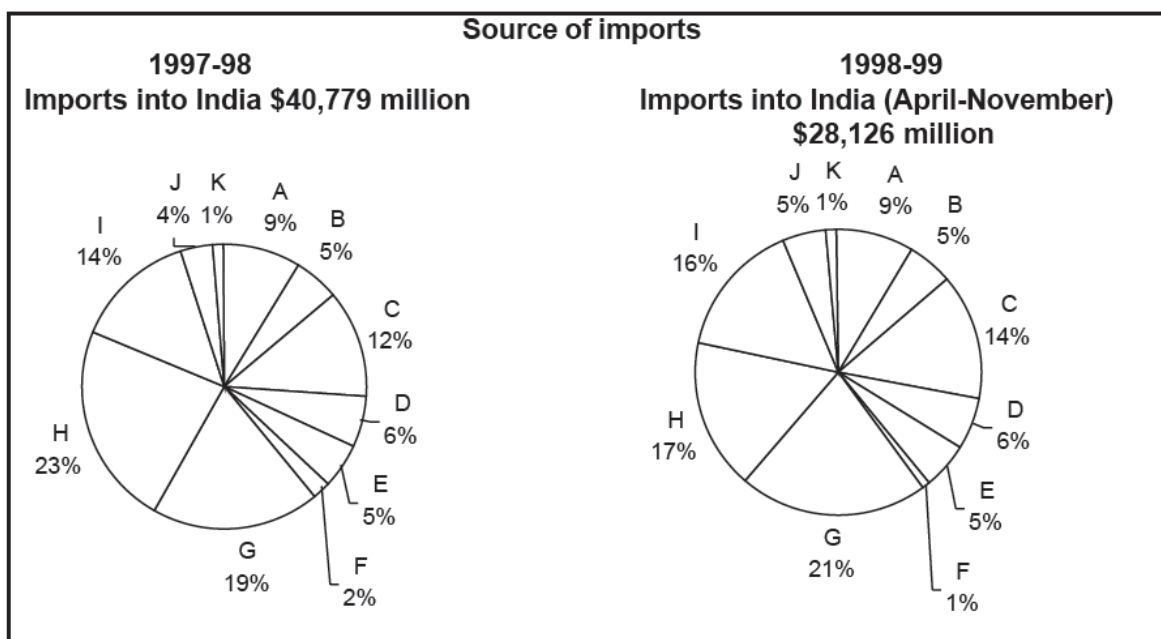
Correspondingly, the net profit increased from ₹ 2.5 crore to ₹12 crore. Net profit is defined as the excess of sales over total costs.



91. The highest percentage of growth in sales, relative to the previous year, occurred in  
(A) 1995-96 (B) 1996-97 (C) 1997-98 (D) 1998-99 (E) None of these
92. The highest percentage growth in net profit, relative to the previous year, was achieved in  
(A) 1998-99 (B) 1997-98 (C) 1996-97 (D) 1995-96 (E) None of these
93. Defining profitability as the ratio of net profit to sales, IVP Ltd., recorded the highest profitability in  
(A) 1998-99 (B) 1997-98 (C) 1994-95 (D) 1996-97 (E) None of these
94. With profitability as defined in question 93, it can be concluded that  
(A) profitability is non-decreasing during the five years from 1994-95 to 1998-99.  
(B) profitability is non-increasing during the five years from 1994-95 to 1998-99.  
(C) profitability remained constant during the five years from 1994-95 to 1998-99.  
(D) None of the above  
(E) (A) & (B)

**Directions for questions 95 to 98:** Answer the questions based on the following information. Consider the information provided in the figure below relating to India's foreign trade in 1997-98 and the first eight months of 1998-99. Total trade with a region is defined as the sum of exports and imports from that region. Trade deficit is defined as the excess of imports over exports. Trade deficit may be negative.

- A. USA
- B. Germany
- C. Other EU
- D. UK
- E. Japan
- F. Russia
- G. Other East European countries
- H. OPEC
- I. Asia
- J. Other LDCs
- K. Others



95. What is the region with which India had the highest total trade in 1997-98?  
(A) USA (B) Other EU countries (C) OPEC (D) Others (E) Russia
96. In 1997-98 the amount of Indian exports, million US dollars, to the region with which India had the lowest total trade, is approximately  
(A) 750 (B) 340 (C) 220 (D) 440 (E) None of these
97. In 1997-98, the trade deficit with respect to India, billion US dollars, for the region with the highest trade deficit with respect to India, is approximately equal to  
(A) 6.0 (B) 3.0 (C) 4.5 (D) 7.5 (E) None of these
98. What is the region with the lowest trade deficit with India in 1997-98?  
(A) USA (B) Asia (C) Others  
(D) Other EU countries (E) None of these

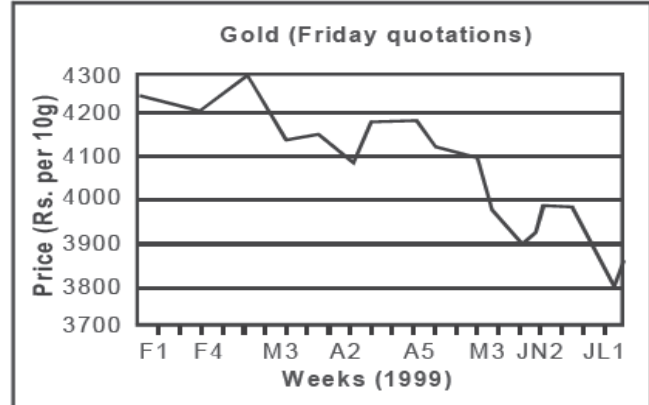
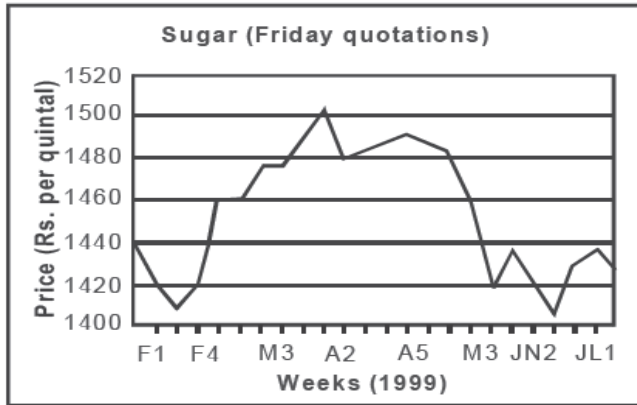
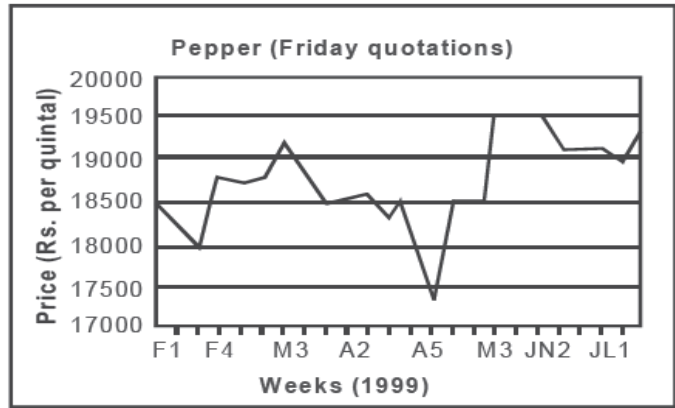
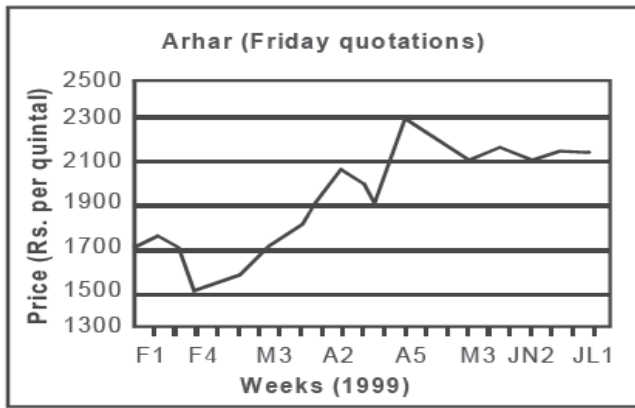
**Directions for questions 99 and 100:** Answer the questions based on the following information.

Assume that the average monthly exports from India and imports to India during the remaining four months of 1998-99 would be the same as that for the first eight months of the year.

99. What is the region to which India's exports registered the highest percentage growth between 1997-98 and 1998-99?  
(A) Other East European countries  
(B) USA  
(C) Asia  
(D) Exports have declined, no growth  
(E) None of these
100. What is the percentage growth rate in India's total trade deficit between 1997-98 and 1998-99?  
(A) 43 (B) 47 (C) 50 (D) 40 (E) None of these

**Directions for questions 101 to 104:** Answer the questions based on the following information.

These questions are based on the price fluctuations of four commodities — arhar, pepper, sugar and gold during February-July 1999 as described in the figures below.



101. Price change of a commodity is defined as the absolute difference in ending and beginning prices expressed as a percentage of the beginning. What is the commodity with the highest price change?
- (A) Arhar (B) Pepper (C) Sugar (D) Gold (E) None of these
102. Price volatility (PV) of a commodity is defined as follows:  
 $PV = \frac{\text{Highest price during the period} - \text{Lowest price during the period}}{\text{Average price during the period}}$   
 What is the commodity with the lowest price volatility?
- (A) Arhar (B) Pepper (C) Sugar (D) Gold (E) None of these
103. Mr. X, a fund manager with an investment company invested 25% of his funds in each of the four commodities at the beginning of the period. He sold the commodities at the end of the period. His investments in the commodities resulted in
- (A) 17% profit (B) 5.5% loss  
 (C) No profit, no loss (D) 5.4% profit  
 (E) None of these
104. The price volatility (PV) of the commodity with the highest PV during the February-July period is approximately equal to
- (A) 3% (B) 40% (C) 20% (D) 12% (E) None of these

**Directions for questions 105 to 109:** Answer the questions based on the following information.

The table below presents data on percentage population covered by drinking water and sanitation facilities in selected Asian countries.

**Population covered by drinking water and sanitation facilities**  
Percentage coverage

	Drinking water			Sanitation facilities		
	Urban	Rural	Total	Urban	Rural	Total
<b>India</b>	85	79	81	70	14	29
Bangladesh	99	96	97	79	44	48
China	97	56	67	74	7	24
Pakistan	82	69	74	77	22	47
Philippines	92	80	86	88	66	77
Indonesia	79	54	62	73	40	51
Sri Lanka	88	52	57	68	62	63
Nepal	88	60	63	58	12	1

(Source: World Resources 1998-99, p. 251, UNDP, UNEP and World Bank.)

Country A is said to dominate B or  $A > B$  if A has higher percentage in total coverage for both drinking water and sanitation facilities, and, B is said to be dominated by A, or  $B < A$ .

A country is said to be on the coverage frontier if no other country dominates it. Similarly, a country is not on the coverage frontier if it is dominated by at least one other country.

105. Which countries are the countries on the coverage frontier?

- (A) India and China
- (B) Sri Lanka and Indonesia
- (C) Philippines and Bangladesh
- (D) Nepal and Pakistan
- (E) None of these

106. Which of the following statements are true?

- 1. India  $>$  Pakistan and India  $>$  Indonesia
- 2. India  $>$  China and India  $>$  Nepal
- 3. Sri Lanka  $>$  China
- 4. China  $>$  Nepal

- (A) 1 and 3      (B) 2 and 4      (C) 1, 2 and 3      (D) 2, 3 and 4      (E) None of these

107. Using only the data presented under 'sanitation facilities' columns, it can be concluded that rural population in India, as a percentage of its total population is approximately

- (A) 76      (B) 70      (C) 73      (D) Cannot be determined      (E) None of these



108. Again, using only the data presented under ‘sanitation facilities’ columns, sequence China, Indonesia and Philippines in ascending order of rural population as a percentage of their respective total population. The correct order is

- (A) Philippines, Indonesia, China
- (B) Indonesia, China, Philippines
- (C) Indonesia, Philippines, China
- (D) China, Indonesia, Philippines
- (E) None of these

109. India is not on the coverage frontier because

1. it is lower than Bangladesh in terms of coverage of drinking water facilities.
2. it is lower than Sri Lanka in terms of coverage of sanitation facilities.
3. it is lower than Pakistan in terms of coverage of sanitation facilities.
4. it is dominated by Indonesia.

- (A) 1 and 2                      (B) 1 and 3                      (C) 4                      (D) Cannot say                      (E) None of these

**Directions for questions 110 and 111:** Answer the questions based on the following information.

These relate to the above table with the additional provision that the gap between the population coverages of ‘sanitation facilities’ and ‘drinking water facilities’ is a measure of disparity in coverage.

110. The country with the most disparity in coverage of rural sector is

- (A) India                      (B) Bangladesh  
(C) Nepal                      (D) B & C                      (E) None of these

111. The country with the least disparity in coverage of urban sector is

- (A) India                      (B) Pakistan  
(C) Philippines                      (D) China                      (E) None of these

**Directions-112-116** Identify the Company/Brand associated with the ad line.

112. Driven by Excellence

- (A) Skoda Rapid                      (B) Ford figo                      (C) Honda Brio  
(D) Chevrolet Beat                      (E) None of these

113. Is se sasta aur Achcha kahee nahee milega

- (A) Big Bazaar                      (B) Subhiksha                      (C) Reliance Fresh  
(D) More                      (E) None of these

114. The Joy of Flying

- (A) Jet Airways  
(B) British airways  
(C) Indigo  
(D) Cathay Pacific  
(E) None of these

115. Sense and Simplicity

- (A) PHILLIPS
- (B) GE
- (C) LG
- (D) SAMSUNG
- (E) None of these

116. There are some things money can't buy.

- (A) Visa
- (B) Amex
- (C) Master card
- (D) LIC
- (E) None of these

**DIRECTIONS 117-120:** Identify the organizations of the Business personalities below

117. Y C Deveshwar

- (A) HDFC
- (B) ICICI
- (C) IOC
- (D) HP
- (E) ITC

118. Chanda Kochar

- (A) Airtel
- (B) ICICI
- (C) Sahara
- (D) HP
- (E) Air India

119. AM Naik

- (A) L&T
- (B) Sahara
- (C) Infosys
- (D) Big Bazaar
- (E) Reliance

120. Cyrus Mistry

- (A) Tata
- (B) Birla
- (C) Sahara
- (D) Godrej
- (E) Reliance

\* \* \*