CAT 2010 Question Paper

Q1. If r, s, and t are consecutive odd integers with r<s<t, which of the following must be true?
(a) rs=t
(b) r+t=2t-s
(c) r+s=t-2
(d) r+t=2s

Q2. Let S be the set of rational numbers with the following properties
1. ½ ϵ S
2. If x ϵ S, then both 1/x+1 ϵ S and x/x+1 ϵ S
Which of the following is true?
(a) S contains all rational numbers in the interval 0<x< 1.
(b) S contains all rational numbers in the interval -1 <x < 1.
(c) S contains all rational numbers in the interval -1 <x < 0.
(d) S contains all rational numbers in the interval 1 <x<°°.

Q3. P Q and R are three consecutive odd numbers in ascending order. If the value of three times P is three less than two times R. Find the value of R
(a) 5
(b) 7
(c) 9
(d) 11

Q4. Consider the following statements:
When two straight lines intersect, then :
I adjacent angles are complementary
II adjacent angles are supplementary
III opposite angles are equal
IV opposite angles are supplementary
Of these statements:
(a) (I) and (III) are correct
(b) (II) and (III) are correct
(c) (I) and (IV) are correct
(d) (II) and (IV) are correct

Q5 A pole has to be erected on the boundary of a circular park of diameter 13 metres in such a way that the difference of its distances from two diametrically opposite fixed gates A and B on the boundary is 7 metres. The distance of the pole from one of the gates is.
(a) 8 metres
(b) 8.25 metres
(c) 5 metres
(d) None of these

Q6. From a square piece of card-board measuring 2a on each side ot a box with no top is to be formed by cutting out trom each comer a square with sides b and bending up the flaps. The value of b for which the box has the greatest volume is (a) S contains all rational numbers in the interval 0<x< 1.
(a) b=a/5
(b) b=a/4
(c) b=2a/3
(d) a/2

Q7. The sum of the areas of two circles which touch each other externally is 153π. If the sum of their radii is 15, find the ratio of the larger to the smaller radius
(a) 4
(b) 2
(c) 3
(d) none of these

Q8. Consider the following statements:

If $a^x=b$, $b^y=c$, $c^z=a$, than $xyz=1$

If $p=a^x$, $q=a^y$, $(p^y q^y)^z=a^2$, than $xyz=1$

If $x^a=y^b=z^c$ and $ab+bc+ca=0$ than $xyz=1$

Of these statements:
(a) I and II are correct
(b) II and III are correct
(c) Only I is correct
(d) All I, II and III are correct

Q 9. If a, b and c are three real numbers, then which of the following is not true? P Q and R are three consecutive odd numbers in ascending order. If the value of three times P is three less than two times R. Find the value of R
(a) $|a+b|<=|a|+|b|$
(b) $|a-b|<=|a|+|b|$
(c) $|a-b|<=|a|-|b|$
(d) $|a-c|<=|a-b|+|b-c|$

Q 10. Let 5 denote the infinite sum $2+5x+9x^2+14x^3+20x^4+\ldots\ldots$ where $|x|<1$ and the coefficient of

x^{n-1} is $\frac{1}{2} n(n+3)$, $(n=1,2,\ldots\ldots)$, then,
(a) $2-x/(1-x)^3$
(b) $2-x/(1+x)^3$
(c) $2+x/(1-x)^3$
(d) $2+x/(1+x)^3$

Q 11. ABCD is a rectangle. The points p and Q lie on AD and AB respectively. If the triangles PAQ, QBC and PCD all have the same areas and BQ = 2, then AQ =
(a) $1+\sqrt5$
(b) $1-\sqrt5$
(c) $\sqrt7$
(d) $2\sqrt7$

Q12. For which value of k does the following pair of equations yield a unique solution for at such that the solution is positive?
$x^2 - y^2 = 0$
$(x-k)^2 + y^2 = 1$
(a) 2
(b) 0
(c) $\sqrt2$
(d) $-\sqrt2$

Q13. In an examination, the average marks obtained by students who passed was x %, while the average of those who failed was y%. The average marks of all students taking the exam was z %. Find in terms of x, y and z, the percentage of students taking the exam who tailed.
(a) (z-x)/(y-x)
(b) (x-z)/(y-z)
(c) (y-x)/(z-y)
(d) (y-z)/(x-z)

Q14. If a = b² = c³ = d^4 then the value of $\log_a$ (abcd) would be :
(a) $\log_a$ 1+ $\log_a$ 2+ $\log_a$ 3+ $\log_a$ 4
(b $\log_a$ 24
(c) 1 + 1/2 + 1/3 + 1/4
(d) 1 + 1/2! + 1/3! + 1/4!

Q15. If three positive real numbers a, b, and c (c>a) are in HP,then log(a+c)+log(a-2b+c) is equal to:
(a)2log(c-b)
(b)2log(a-c)
(c)2log(c-a)
(d)log a+ log b+ log c

Q16. Let f be an injective map with domain {x,y, z} and range {1,2,3} such that exactly one of the following statements is correct and the remaining are false. f{x) = 1 , f(y) ≠ 1 ,f(z) ≠ 2. The value of f'(1) is
(a) x
(b) y
(c) z
(d)None of these

Q17. For constructing the working class consumer price index number of a particular town, the following weights corresponding to different group of items were assigned : Food-55, Fuel-15, Clothing-10, Rent-8 and Miscellaneous-12.
It is known that the rise in food prices is double that of fuel and the rise in miscellaneous group prices is double that of rent.
In October 2006, the increased D.A. by a factory of that town by 182% fully compensated for the rise in prices of food and rent but did not compensate for anything else. Another factory of the same locality increased D.A. by 46.5%, which compensated for the rise in fuel and miscellaneous groups.
Which is the correct combination of the rise in prices of food,fuel,rent and miscellaneous groups?
(a) 320.14, 159.57, 95.64, 166.82
(b) 317.14, 158.57, 94.64, 189.28
(c) 311.14, 159.51, 90.64, 198.28
(d)321.14, 162.57, 84.46, 175.38

Q18. In a factory making radioactive substances, it was considered that the three cubes of uranium together are hazardous. So the company authorities decided to have the stack of uranium interspersed with lead cubes. But there is a new worker in a company who does not know the rule. So he arranges the uranium stack the way he wanted. What is the number of hazardous combinations of uranium in a stack of 5?
(a) 3
(b) 7
(c) 8
(d) 10

Directions (Q.19-20): Each of the questions is followed by two statements I and II. Give Answer

(a) if the question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

(b) if the question can be answered by either statement alone.
(c) if the question can be answered by using both statements together, but cannot be answered using either statement alone.
(d) if the question cannot be answered even by using both the statements together

Q19. A line graph on a graph sheet shows the revenue for each year from 1990 through 1998 by points and joins the successive points by straight line segments. The point for revenue of 1990 is labeled A, that for 1991 as B. and that for 1992 as C. What is the ratio of growth in revenue between 1991 -92 and 1990-91 ?
Statement I: The angle between AB and X-axis when measured with a protractor is 40 degrees, and the angle between CB and x-axis is 80 degrees.
Statement II: The scale of y-axis is 1 cm = ' 1000

20. Geetanjali Express, which is 250 metre long when moving from Howrah to Tatanagar crosses Subarnarekha bridge in 30 seconds. What is the speed of Geetanjali Express?
Statement I: Bombay Mail, which runs at 60 km/hour crosses the Subarnarekha bridge in 30 seconds.
Statement II: Bombay Mail when running at 90 km/hour crosses a lamp post in 10 seconds.

SECTION-II (20-QUESTIONS)

Directions(Q.21-23)Analyse the passage given and provide an appropriate answer for questions.

Much as an electrical lamp transforms electrical energy into heat and light, the visual 'apparatus' of a human being acts as a transformer of light into sight. Light projected from a source or reflected by an object enters the cornea and lens of the eyeball. The energy is transmitted to the retina of the eye w hose rods and cones are activated. The stimuli are transferred by nerve cells to the optic nerve and then to the brain, man is a binocular animal, and the impressions from his tw o eyes are translated into sight-a rapid, compound analysis of the shape, form, colour, size, position, and motion of the things he sees. Photometry is the science of measuring light. The illuminating engineer and designer employ photometric data constantly in their work. In all fields of application of light and lighting, they predicate their choice of equipment, lamps, wall finishes, colours of light and backgrounds, and other factors affecting the luminous and environmental pattern to be secured, in great part from data supplied originally by photometric laboratory. Today extensive tables and charts of photometric data are used widely, constituting the basis for many details of design. Although the lighting designer may not be called upon to the detailed work of making measurements or plotting data in the form of photometric curves and analyzing them, an understanding of the terms used and their derivation form valuable background knowledge. The perception of colour is a complex visual sensation, intimately related to light. The apparent colour of an object depends primarily upon four factors: its ability to reflect various colours of light, the nature of the light by which it is seen, the colour of its surroundings, and the characteristics and state of adaptation of the eye. In most discussions of colour, a distinction is made between white and coloured objects. White is the colour name most usually applied to a material that diffusely transmits a high percentage of all the hues of light.

Q21. According to the passage, lighting engineers need not
(a)Plot photometric curves
(b) Utilize photometric data
(c)understand photometric techniques
(d) have mathematical expertise

Q22. The color black is an example of
(a) A surface colour
(b) An achromatic colour
(c)An organic colour
(d) A diffuse colour

Q23. Paint is an example of a substance containing
(a)Inorganic material

(b) Body colours
(c)Surface colours
(d) Metallic colours

Directions (Q24-26):Amalyse the passage given and provide an appropriate answer for questions.

Deborah Mayo is a philosopher of science who has attempted to capture the implications of the new experimentalism in a philosophically rigorous way. Mayo focuses on the detailed way in which claims are validated by experiment, and is concerned with identifying just what claims are borne out and how. A key idea underlying her treatment is that a claim can only be said to be supported by experiment if the various ways in which the claim could be as fault have been investigated and eliminated. A claim can only be said to be borne out by experiment, and a severe test of a claim, as usefully construed by Mayo, must be such that the claim would be unlikely to pass it if it were false.

Her idea can be explained by some simple examples. Suppose Snell's law of refraction of light is tested by some very rough experiments in which very large margins of error are attributed to the measurements of angles of incidence and refraction, and suppose that the results are shown to be compatible with the law within those It margins of error. Has the law been supported by experiments that have severely tested it? From Mayo's perspective the answer is "no", because, owing to the roughness of the measurements, the law of refraction would be quite likely to pass this test even if it were false and some other law differing not too much from Snell's law true. An exercise I carried out in my school-teaching days serves to drive this point home. My students had conducted some not very I careful experiments to test Snell's law. I there presented them with some alternative law's of refraction that had been suggested in antiquity and mediaeval times, prior to the discovery of Snell's law', and invited the students to test them with the measurements they had used. to test Snell's law; because of the wide margins of error they had' attributed to their measurements, all of these alternative laws pass the test. This clearly brings out the point that the experiments in question did not constitute a severe test of Snell's law. The law would have passed the test even if it were false and one of the historical alternatives true.

Q24. Which of the following conclusion can be drawn from the passage?
(a) Precise measurement is a sufficient condition to ensure validity of conclusions resulting from an experiment.
(b) Experimental data might support multiple theoretical explanations same time, hence validity of theories needs to be tested further.
(c) Precise measurement is both a necessary and sufficient condition to ensure validity of the conclusions resulting from an experiment.
(d) Precise measurement along with experimenter's knowledge of the theory underpinning the experiment is sufficient to ensure the validity of conclusions drawn from experiments.

Q25. As per Mayo's perspective, which of the following best defines the phrase "scientific explanation"?
(a)One which is most detailed in its explanation of natural phenomena.
(b)One which survives examinations better than other explanations.
(c)One which has been thoroughly tested by scientific experts.
(d)One which refutes other explanations convincingly,

Q26. The author's use of Snell's law of refraction to illustrate Mayo's perspective can best said to be
(a) Contrived
(b) Premediated
(c) Superfluous
(d) Illustrative

DIRECTIONS (Q 27-29): Analyse the passage given and provide an appropriate answer for questions.

An expert group has sounded a timely warning on what 'environmentally destructive tourism' will mean to national parks and wildlife sanctuaries and the objectives they are supposed to serve. Given the unique and rare wildlife the country has been endowed with, the rationale for using the resources for attracting tourists from abroad is unassailable. This necessarily postulates that the flora and the fauna should be protected and conserved. As a matter of fact, much of the government's

interest in wildlife preservation has to do with the
tremendous prospect of tourist traffic on that account. Yet the risk of the revenue-earning motivation overrunning the conservation imperatives is very real, the lure of the coveted foreign exchange that goes with this business only, is serving to enhancing it several folds. Even with the tourist inflow far below the potential, the pressure of visitors is said to have been already felt on the tiger reserves. With the Government of India's declared intent to boost tourism quite justified for its own reasons, the need for eliminating the risk assumes a greater sense of urgency. The study team has noted that most of the 41 national parks and 165 wildlife sanctuaries surveyed are open to the tourists. The less frequented among them may not require special attention immediately in this respect as much as the ones that are major tourists attraction do. These include the Sanjay Gandhi National Park in Maharashtra, Nandankanan in Orissa and Bannerghatta in Karnataka. Over a year ago, the Indian Board for Wildlife expressed concern over the looming danger, and decided that the core areas of national parks and sanctuaries should be kept totally free from biotic disturbances, and the visitor be permitted to view the wildlife only from the areas marked out for the purpose. And now, the expert group has come up with the suggestion that a case by case evaluation be done of the 'capacity' as well as the 'limitations' of all the national parks and wildlife sanctuaries and based on such assessment an area-specific plan for tourist promotion within the 'safety' norms be charted. That this is the most scientific way of going about the job, and that there is no time to lose can be readily conceded.

Q27. Biotic disturbances in the context means
(a) Attacks from other living things, animals, etc.
(b) The disturbances caused by the natives on seeing the strange foreigners.
(c) The political disturbances causing the closedown of the parks.
(d) Disturbances caused by the wild animals on seeing the tourists.

Q28. By using the expression "environmentally destructive tourism" the author means
(a) The preservation of the wild beasts.
(b) Destruction of the wildlife and sanctuaries.
(c) Destroying the attractive sources of wild animals and birds.
(d) The maintenance of the flora and fauna of the country.

Q29. To implement the most scientific ways of tourism, we should
(a) Get industries and talented persons trained in the field.
(b) From a commission and plan out how to implement the suggestions.
(c) Send a group of scientists abroad to learn more about tourism.
(d) Speed as much finance as possible to better the suggestions made

DIRECTIONS (Q. 30-31): Select the most appropriate word(s) from the given choice to fill in the blank(s).

Q30. Justice Minister Bola Ige, confronted with the general incivility of local police, placed a_____on the cads. Said the Hon. Bola Ige, " I pray that God will make big holes in their pockets."
(a) malediction
(b) sanction
(c) proscription
(d) plea

Q31. During the heated discussion, the leader of the group .... refuted ail the claims brought by his opponents. Later everybody acknowledged that he survived by most .... luck.
(a) ingeniously, incredible
(b) ingeniously, incredulous
(c) ingenuously, incredible
(d) ingenuously, incredulous

Q32. Choose the option that points out sentence(s) with grammatical error(s).
l. I love the man dancing on the table.

II. I love the man's dancing on the table.

III. In 1986 Elie Wiesel was named the Nobel Peace Prize recipient, an honour established by Alfred Nobel.

IV. Neither of the recommendations works as well as we thought they would.

V. Either the Minister or the Minister's wife will have to excuse themselves from the reception to speak to the caterer

(a) III and V b) I and IV (c) II and V (d) III and IV

DIRECTIONS (Q.33- 34): For the word given at the top of each table, match the dictionary definitions 011 the left (A, B, C, D) with their corresponding usage on the right (E, F, G, H). Out of the four possibilities given in the boxes below the table, select the one that has all the definitions and their usages correctly matched.

Q33. Infer : Dictionary definition

A. To derive by reasoning or implication

B. To surmise

C. To point to

D. To hint

Usage

E. We see smoke and infer fire

F. Given Some utterance, a listener may

G. I waited all day to meet him.From this you can infer my zeal to see him.

H. She did not take part in the debate except to ask a question inferring that she was not interested in the debate.

(a)A-G;B-E;C-H;D-F

(b)A-F,B-H,C-E,D-G

(c)A-H;B-G;C-F;D-E

(d)A-E;B-F;C-G;D-H

Q34. Catch: Dictionary definition

A. capture

B. gasp with senses of mind

C. deception

D. thing or person worth trapping

Usage

E. all her friends agreed that Prasad was a good catch

F. the proposal sounds very good but where is the catch?

G. Hussain tries to catch the spirit of india in this painting

H. Sorry,I couldn't catch you.

(a)A-H;B-F;C-E;D-G

(b)A-F,B-G,C-E,D-H

(c)A-G;B-F;C-E;D-H

(d)A-G;B-H;C-F;D-E

Directions (Qs 35-36): please choose the correct alternative that can go into the sentence in the blank space to make a coherent sentence:

Q35. The _____ of the country should take greatest interest in promoting the indigenous works that are rooted in the deep tradition of scholarship across the world.

(a) LITERATI

(b) LITERATE

(c) LITERATURE

(d) LITERAL

Q36. _____ of different categories of problems often leads to design of improper solutions that fail to address the complexities of the problem.

(a) CONFABULATION
(b) CONFLATION
(c) CONFLICT
(d) CONFESSION

DIRECTIONS (Qs. 37 -38): Mark the correct option, which puts the parts of the sentence in right order:

Q37.
I. But she gained courage as she went on
II. She was a little nervous about it just at first
III. and opened their eyes and mouths so very wide
IV the two creatures got so close to her, one on each side.
(a) IV, III,II,I
(b) II, IV, III, I
(c) II,I,IV,III
(d)none of the above

Q38.
I. It would perhaps be possible for him to be of some use to this brave girl
II. he said to himself, vaguely at first, that
III. without neglecting anything of what was due to his important mission
IV. and this idea pleased him
(a) II, III, I, IV
(b) III, II, I, IV
(c) I,III,II, IV
(d) None of the above

DIRECTIONS (Qs 39-40): Below are the words followed by prepositions. Find out which set(s) is/are incorrect.

Q39.
I. Indict to
II. Intrigue on
III. Endow with
IV. Trample on
(a) I and IV
(b) I and III
(c) I, III and IV
(d) None of the above

Q40.
I. Trace to
II. Sparing of
III. Replete with
IV. Wonder at
(a) I and III
(b) I, II and III
(c) II, III and IV
(d) None of the above

DIRECTIONS (Qs. 41-45): The data given below pertains to seven different industry sector with respect to income, expenditure. Profits. Study the data and answer the questions.

Particulars	chemical	Diversified	Electricity	Food	Machinery	Services	Textiles
1 Sales	498,476	128,125		82,808			56,401
2 Other Income	7,303		2,374		2,887	6,097	1,705
3 Total Income=(1+2)		130,830			128,733		58,106
4 Raw material cost	338,683	78,237	31,060	48,188	54, 994	81,600	33,738
5 Power & fuel expenses	18,467		4,865	2,003	1,973		
6 Salaries and wages	13,791	4,412		4,284	20,038	44,371	4,361
7 Depreciation	11,065	4,807	6,311		5,026	22,854	3,013
8 Interest payments	11,135	2,923	5,756			133,619	5,259
9 Other expenses		24,706	5,604	23,570	34,271	97,092	10,368
10 Total expenses =(4+5+6+7+8+9)		119,316	58,769	80,750	120,557	385,694	
11 Profit before tax =(3–10)		11,514		3,814	8,176	50,484	
12 Tax paid	7,467		2,394				0
13 Profit after tax =(11–12)	19,861	8,887	8,501	2,538	5,001	32,698	-2,874

Q41. Which of the following statements is wrong ?
(a) Depreciation expense is the lowest for food industry
(b) Power and fuel expenses are 5th largest item in the expenditure of diversified industries.
(c) Electricity industry earns more of other income as a percentage of total income compared to other industries.
(d) Raw material cost is the largest item of expense in all industry sectors

Q42. Depreciation as a percentage of total expenses is maximum in which industry sector ?
(a) Chemical
(b) Diversified
(c) Electricity
(d) Machinery

Q43. Which industry sector has 'salaries and wages' as 3rd largest item in its expenses?
(a) Food
(b) Services
(c) Textiles & Food
(d) Food & Machinery

Q44. If the industry sectors are ranked on the basis of 'Tax paid as a proportion of sales' in the ascending order, then which industry will be placed at rank 3?
(a) Machinery
(b) Electricity
(c) Food
(d) Diversified

Q45. If the ranking is based on Profit Before Tax in the descending order, subject to the condition that 'other expenses' of all the industry sectors equals zero, then which of following statements is wrong?
(a) Rank of Chemical industry does not change
(b) Rank of electricity industry declines
(c) Diversified industry rank changes from 3rd to 4th
(d) Rank of food industry changes from 5th to 6th

DIRECTIONS (Qs. 46 -50): Seven companies A, B, C, D, E, F and G are engaged in production of two items I and II. The comparative data about production of these items by the seven companies is given in the following Graph and Table. Study them carefully to answer the questions that follow.
PERCENTAGE OF THE TOTAL PRODUCTION PRODUCED BY THE SEVEN COMPANIES
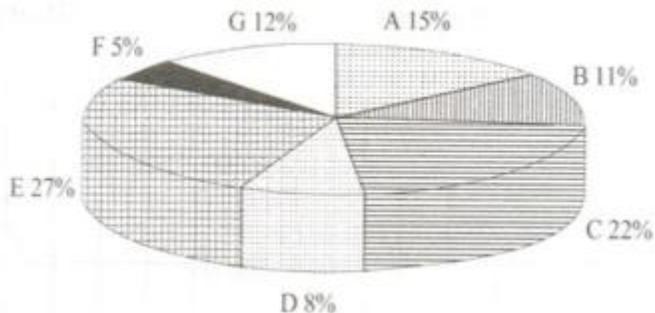
Cost of the total production (both items together) by seven companies = 25 crores
RATIO OF PRODUCTION BETWEEN ITEMS I AND II AND THE PERCENT PROFIT EARNED FOR THE TWO ITEMS

Company	Ratio of Production		Percent Profit Earned	
	Item I	Item II	Item I	Item II
A	2	3	25	20
B	3	2	32	35
C	4	1	20	22
D	3	5	15	25
E	5	3	28	30
F	1	4	35	25
G	1	2	30	24

Q46. Cost of production of item I by company F is what percent of the cost of production of item II by company D?
(a) 16%
(b) 33.33%
(c) 66.67%
(d) None of these

Q47. What is the total profit earned by company G for items I and II together?
(a)78 lakh
(b)1.62 crore
(c)7.8 crore
(d) 16.2 lakh

Q48. What is the ratio of the cost of production of item I by company A to the cost of production of item I by company D?
(a) 3:5
(b) 1:2
(c)2:1
(d) 2:3

Q49. The cost of production of both items together by company E is equal to the total cost of production of both items together by which of the two companies?
(a) C and D
(b) B and G

(c) A and D
(d) C and F

Q50. What is the total of the cost of production of item I by company A and the cost of production of item II by company B?
(a)2.6 crore
(b)26 lakh
(c)3.35 crore
(d)33.65 lakh

DIRECTIONS (Qs. 51 - 54): Study the following bar graph and line graph giving details of 'Number of Workers Employed' and 'Number of Units Shipped' respectively of M/s Mega Corp Limited to answer these questions.

M/s Mega Corp Limited: Number of Workers Employed and Units Shipped
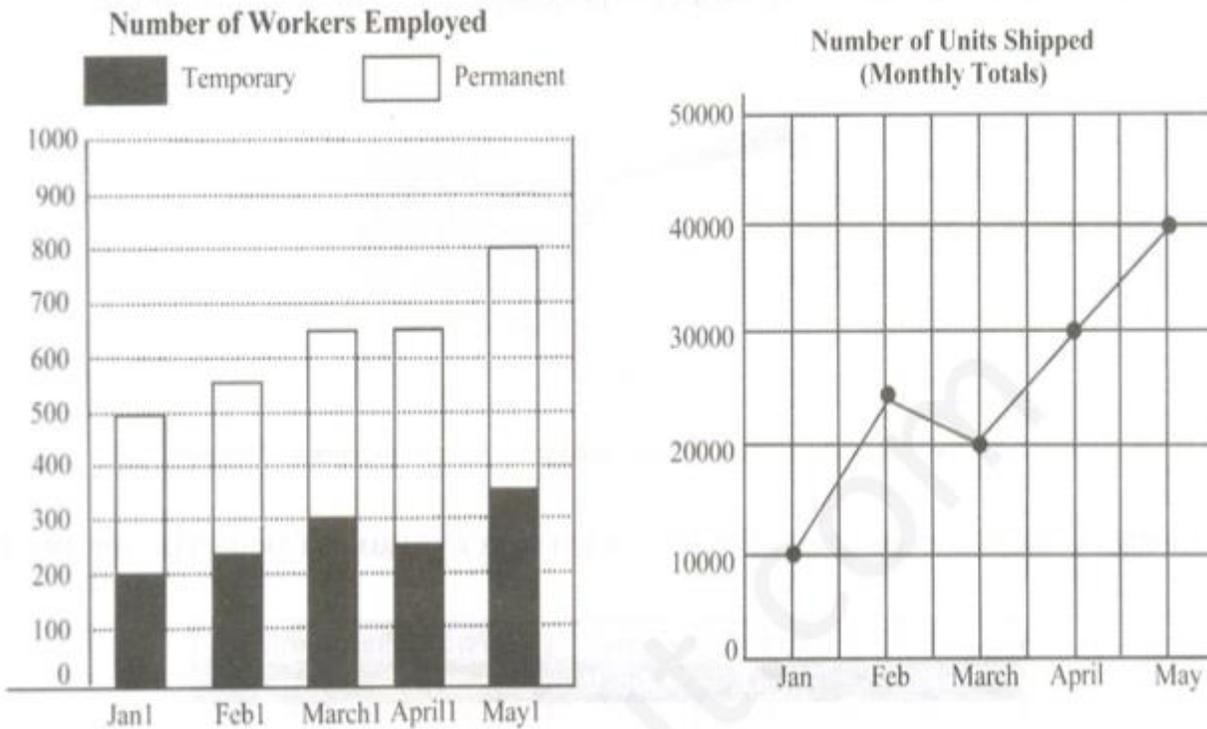
Q51. By what percent did the number of temporary workers employed by M/s Mega Corp Limited increase from April to May1?
(a)40%
(b)25%
(c)20%
(d)12%

Q52. What was the difference if any between the number of permanent workers employed by M/s mega corp ltd on march and the number of permanent workers employed on april 1?
(a)0
(b)50
(c)100
(d)150

Q53. What was the total no of units shipped by M/s Mega corp ltd for the months of January, feburary, march (approximately)
(a)40000
(b)55000
(c)60000
(d)70000

Q54. if on may 1,60% of the permanent workers and 40% of the temporary workers employed by M/s mega Corp ltd were women how many of the workers employed by M/s Mega Corp Limited at that time were women?
(a)200
(b)120
(c)410
(d)260

DIRECTIONS (Qs. 55-56): These questions are based on the following information

IT School of Management is a management institute involved in teaching.training and research. Currently it has 37 faculty members. They are involved in three jobs: teaching, training and research. Each faculty member working with IT School of Management has to be involved in at least one of the three jobs mentioned above:

- A maximum number of faculty members are involved in training. Among them, a number of faculty members are having additional involvement in the research.
- The number of faculty members in research alone is double the number of faculty members involved in all the three jobs.
- . 17 faculty members are involved in teaching. The number of faculty members involved in teaching alone is less than the number of faculty members involved in research alone.
- The faculty members involved in the teaching are also involved in at least one more job.

55. After sometime,the faculty members who were involved in all the three tasks were asked to withdraw from one task. As a result, one of the faculty members each opted out of teaching and research, while remaining ones involved in all the three tasks opted out of training. Which one of the following statements, then necessarily follows:
(a) The least number of faculty members is now involved in teaching.
(b) More faculty members are now associated with training as compared to research.
(c) More faculty members are now involved in teaching as compared to research.
(d) None of the above

56. Based on the information given above, the minimum number of faculty members involved in both training and teaching, but not in research is:
(a) 1
(b) 3
(c) 4
(d) 5

**57.** Read the following directions carefully and answer the question. You should tick
(a) If any one of the statements alone is sufficient to answer the question
(b) If both statements individually are sufficient to answer the question
(c) If both statements together are required to answer the question
(d) If both statements are not sufficient to answer the question
There are four racks numbered 1,2,3,4 and four books numbered 1,2,3,4. If an even rack has to contain an odd numbered book and an odd rack contains an even numbered book then what is the position of book 4?
(I) Second book has been put in third rack
(II) Third book has been put in second rack

Directions (Qs. 58-59): The following network gives details about the various activities carried out in a bottling firm for their latest project and the time required for each activity. The average cost incurred in each activity is 5 times the square of the duration of the activity. If the organisation wants to reduce the duration of any particular activity, in addition to the average cost, it will have to incur an amount equal to 15 times the cube of the new duration of the activity.
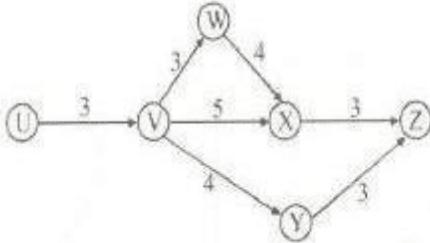
58. The completion of one cycle of the network results in one bottle ready to be sold in the market. The project involves a total of 800 bottles. What is the average cost of the entire project?
(a) Rs. 74400
(b) Rs. 372000
(c) Rs. 15000
(d) Rs. 18500

59. If profit is defined as the difference between the selling price and the average cost, and each bottle is sold for Rs. 510, what is the approximate percent profit earned by the firm?
(a) 5%
(b) 10%
(c) 15%
(d) 17.5%

60. Among Anil, Bibek, Charu, Debu and Eswar, Eswar is taller than Debu but not as fat as Debu. Charu is taller than Anil but shorter than Bibek. Anil is fatter than Debu but not as fat as Bibek. Eswar is thinner than Charu, who is thinner than Debu. Eswar is shorter than Anil. Who is the thinnest person?
(a) Bibek
(b) Charu
(c) Debu
(d) Eswar

ANSWERS
1 (d)
2 (a)
3 (c)
4 (b)
5 (c)
6 (c)
7 (a)
8 (d)
9 (c)
10 (a)
11 (a)
12 (c)
13 (a)
14 (c)
15 (c)
16 (b)

17 (b)
18 (c)
19 (a)
20 (c)
21 (a)
22 (b)
23 (b)
24 (c)
25 (b)
26 (d)
27 (d)
28 (c)
29 (b)
30 (a)
31 (a)
32 (d)
33 (d)
34 (d)
35 (a)
36 (b)
37 (b)
38 (a)
39 (d)
40 (d)
41 (d)
42 (c)
43 (d)
44 (c)
45 (d)
46 (d)
47 (a)
48 (c)
49 (d)
50 (a)
51 (a)
52 (b)
53 (b)
54 (c)
55 (d)
56 (a)
57 (a)
58 (b)
59 (b)
60 (d)