

THE PRINCETON REVIEW XAT SAMPLE PAPER 1

INSTRUCTIONS – Please read these carefully before attempting the test

1. This test is based on pattern of previous years' XAT papers.
2. There are three sections.
Section 1- English & Reading Comprehension (60 questions)
Section 2-General Awareness(50 Questions)
Section 3- Quantitative Ability & Analytical ability (60 questions)
3. **The total time allotted is 2 hours exactly.** Please note your start time and end time on the answer sheet. Do not take more than 2 hours, or you will get a wrong assessment.20 minutes for writing an essay was allowed after writing the objective paper.
4. Please fill all the details, as asked on top of the answer sheet.
5. Please try to maximize your attempt overall, **but you need to do well in all sections.**
6. **There is 1 mark for every right answer and 0.25 negative mark for every wrong one.**
7. There is no sectional time limit.
8. Since it is a time constrained test and you have 2 hours, and all questions carry equal marks, please do not get stuck on any question, move fast to try and do easier ones.
9. **Please do all scratch work on paper only, no extra sheets to be used.** Put all your answers on the answer sheet.
10. Relax. You are competing against yourself.

SECTION 1

Directions for questions 1 –20: Each of the two passages given below is followed by five questions. Choose the best answer to each question.

PASSAGE-I

A multi-sectoral survey done by the International Clinical Epidemiologists Network (INCLIN) has found that contrary to popular belief, domestic violence in India cuts across social and educational status. Economic and gender relations are undergoing changes, with an increasing number of women entering the formal and informal labour markets. This casts the woman in the role of breadwinner as opposed to home-maker, leading to increasing use of violence as a mechanism to subjugate her.

The study found that women-educated and illiterate, from rural and urban areas, engaged in paid and unpaid labour-suffer varying degrees of physical and psychological violence by their husbands. Two out of every five married women reported being hit, kicked, beaten or slapped by their husbands. Fifty percent of the women experiencing physical violence also reported physical abuse during pregnancy. A respondent from a slum colony in Bhopal said that she was beaten not only by her husband but also by all members of his family.

In the lower economic strata, abused women typically lead a complicated life. They work as domestic help, which often means unsympathetic employers. Add to this small children who need attention and alcoholic husbands, and it is a vicious cycle.

Why do women face violence at the hands of those who are supposed to provide them security? The range of 'causes' varies from not cooking on time to mismanagement of the household to neglect of children. In short, non-adherence to gender roles and responsibilities leads to violence, or the threat of it, is used very often to ensure 'discipline', which either maintains gender roles, or prevents changes in gender relations. For example, alcohol and dowry have long been associated with violence, but then, why is it that men beat only their wives and children after drinking? Why is it that women have to bring a host of material possessions to establish and maintain their

status within the matrimonial homes? Both these phenomena reflect women's subordination within marriage, a strongly endorsed gender role in society.

One arena in which gender roles are undergoing rapid change is the economic sphere, with increasing numbers of women entering the formal and informal labour market. The study found that Nagpur, over 90 percent of the women who had reported experiencing violence were involved in paid work. The Nagpur data revealed another significant point. More abuse if their husbands were unemployed. This suggests that working women suffer more abuse if their husbands are also unemployed. Gender gap in employment acts as a further trigger for domestic violence.

This should, however, not be interpreted to mean that providing employment opportunities to unemployed men would automatically ensure reduction in violence in against women. On the contrary, violence is frequently used as a mechanism to deal with any attempt at reversal in gender role, which pits 'man-the-bread-earner' against 'woman-the-home-market'.

In a similar vein, the recent National Family Health found that women working for money are more likely to have been beaten in the last 12 months. A respondent from rural Lucknow, sharing her story of marital abuse, said, "He insults me in front of my relatives and neighbours. He used to beat me also but for the past year that has stopped, mainly because he is now in a better job and earning better."

It is also important to view these findings against the recent trend of employed women seeking help. A recent study by the Tata Institute of Social Sciences, Mumbai, found that the number of employed women seeking help at the special cell for women and that women and children went up with increasing year of experiencing violence. Case-workers at the special cell hypothesise that women in paid employment probably have a wider network of support, which enable them to explore alternative options over a longer period of time. That women in regular employment are turning up for counseling and help suggest that they are less willing to tolerate domestic violence.

Economic forces are opening at two dichotomous level that expose women to the risk of violence. Liberalisation has resulted in increased entry of women into the labour market- albeit in the informal sector- leading to a re-negotiation of gender roles. However, the same economic forces are also promoting a consumerist lifestyle that reinforces regressive gender roles, placing women at greater risk as regards domestic violence.

Middle-class women today are being increasingly targeted as the ultimate consumers. The message is to aspire to a lifestyle of acquisition; and women are positioned as instruments through which such acquisition possible. This acquisition is projected by an image of the savvy working wife or a wife who is able to bring all this into the matrimonial home through dowry.

In the changing economic scenario, dowry has entered into societies where it was hitherto unheard of. A whole body of literature documents this emerging phenomenon in various parts of India, like Kerala and Tehri Garhwal. For example, the INCLIN survey found some of the highest rates of dowry dissatisfaction and the reporting of new dowry demands in Thiruvanthapuram in Kerala.

It is essential to take cognizance of the wide prevalence of domestic violence, especially as a response to changing gender roles- roles that are being both challenged and reinforced by rapid social and economic transitions. Yet planners and policy-makers position many of these transitions as inevitable consequences of development.

Is domestic violence, then, an inevitable fallout of development? The answer is a categorical no. A development paradigm in which domestic violence is a 'by-product', is antithetical to the very goals it seeks to achieve. If, as Nobel laureate Amartya Sen says, development is the realization of human rights, then the existence of domestic violence is a fundamental barrier to development.

1. Chances of domestic violence are higher in case of _____ wives and _____ husbands.
 - (1) unemployed, poor
 - (2) employed, poor
 - (3) unemployed, employed
 - (4) employed, unemployed

2. The male psychology behind domestic violence could be
 - (1) a difficulty in accepting the wife in a non traditional role
 - (2) outward manifestation of poverty-induced frustrations
 - (3) greed and dowry
 - (4) seeking an outlet for the natural animalistic instinct for violence

3. The institution of dowry, according to the author, is a proof of
- (1) masculine
 - (2) societal greed
 - (3) lower status of women in marriage
 - (4) lack of social change in India
4. Why, according to the author, improvement in employment situation for the males will still not solve the problem?
- (1) gap in earning will still be a factor.
 - (2) Masculine need to subjugate working women will still remain.
 - (3) Drinking and dowry problems won't yet be solved.
 - (4) All the above
5. The institution of dowry, according to the author, is governed by the dictates of
- I. Tradition II. economics of greed
- (1) I only (2) I only (3) I and II (4) Neither I nor II
6. The consumerist lifestyle projects women today as a
- (1) symbol of independence (2) subject for violence
 - (3) tool for dowry (4) means for acquisition
7. The author's conclusions about women turning to counseling makes which of the following assumptions?
- (1) Economic security emboldens women.
 - (2) Desperation leads women to turn to counseling.
 - (3) Women won't tolerate violence beyond a point.
 - (4) Drinking is abhorred by women in general.
8. The author can most strongly criticized on which of the following grounds?
- (1) a female chauvinistic view
 - (2) ultra-feminism
 - (3) proposing no concrete solutions
 - (4) stereotyping the male species
9. "The author suggests that today's advertisements of products are also promoting dowry." In the light of the given passage, this statement
- (1) is probably true
 - (2) is definitely true
 - (3) Can be neither established nor rejected
 - (4) is definitely false
10. According to the author, domestic violence cuts across women
- (1) is predominant in lower classes
 - (2) is predominant in kerala and tehri - Garhwal
 - (3) cuts across class barriers
 - (4) and is a fall out of development

PASSAGE-2

No effort is made to understand the reasons for these recurring disasters. Nobody has or the time or the inclination to understand the reasons. Unless and until we make an effort to understand these disasters will continue year after year with ever-increasing intensity.

The paramount need of day is “information, education, and planning”. Information would mean gathering data from all over the world about environmental degradation, loss of forest cover or mangroves, and pollution of all kinds.

Education would mean informing the rules the mankind the reasons for these distressed.

People must be made aware of the phenomenon of global warming. The vaporous by products of human activities create gas, like carbon dioxide-CO₂ – which traps vast amount of heat resulting in the increase of earth’s temperature, which boosts sea-level, shifts seasons. Unseasonal floods, rains, droughts etc. are the direct pattern of seasons but not so under El Nino. Increase of two degrees in global warming can cause a havoc.

Greenhouse effect is another phenomenon, which haunts us, incoming sunlight has an energy equivalent to about 3,100 watts bulbs per sq yard. Lower air layers, which contain a number of gases, water vapour, CO₂ and many others, trap the heat when these gases warm up, some of the heat is radiated back to earth’s surface. This is broadly known as green effect.

CO₂ emission accounts for 60 percent of warming and has a life span of about 100 years in the atmosphere. Water vapour in contrast has a life span of eight days only.

Ozone-level depletion is another cause of series concern as it causes killer cancer for which as yet there is no cure.

Once we understand the causes, it is easy to take to remedial measures. This brings us to planning.

Effluent management planning is the dire need of the day. There should be steering committee of governmental ministers, scientists, industries, NGOs, to devise means to develop and install machineries to prevent major cause of polluting effluents mentioned earlier. Within a time-bound framework, these devices must be installed, failing which the erring industries must be closed down. No new industries should be permitted without efficient effluent management and treatment. Chemical pesticides should be phased out gradually. Indian farmer for centuries depended upon organic fertilizers. Let us opt for them again.

Recently, studies showed that mother’s milk has DDT contents, obviously from consuming food having agrochemicals or pesticides. The indiscriminate use of pesticides kills both predatory and beneficial insects also. Let us bring back use of Neem for pesticides, which kills only predatory insects, or Tulsi for cleaning the atmosphere from suffocating pollution. Planting these trees on war footing in the urgent need of the day. A country needs more than 30 percent forest cover. Trees retain water in soil and act as buffers against the waves. They are necessary for maintaining the regular cycle of seasons. India has less than 20 percent of forest cover.

All this is possible if we opt for information technology. Vast sources of information are available. Let us use them to bring the knowledge to the doorstep of a common man, the executive, the politicians and the judiciary.

Environment is a finely-tuned and extremely well –balanced ecological mechanism. Flora and fauna, birds, animals and, of course, humans play a vital role. Touch one adversely and all suffer. We are courting irreversible disaster.

We have turned our back on Nature. Let us go back to Nature- at least for our survival.

11. According to the author, the various constituents of the environment are
 - (1) Supplementary
 - (2) independent
 - (3) mutually in exclusive
 - (4) interdependent
12. According to the author, the first step toward any remedy is
 - (1) understanding the cause
 - (2) analysis of the existent resources
 - (3) planning
 - (4) sound implementation of ideas
13. Which of the following is not inferable from the passage?
 - I. Cancer is Incurable.
 - II. The present nature of men’s interaction is unsustainable.
 - III. Mother’s milk is not advisable.
 - (1) I only
 - (2) I and II
 - (3) II and III
 - (4) All I, II and III
14. Which is the main culprit that causes greenhouse effect?
 - (1) incoming sunlight
 - (2) trapping gases
 - (3) gaseous radiation
 - (4) lower air-layers
15. India’s forest cover is roughly
 - (1) half of what is needed
 - (2) adequate
 - (3) adequate for mangroves
 - (4) None of these
16. Which of the following would not get the author’s support, in your view?
 - (1) genetically modified rice for eating
 - (2) food grains produced by robots
 - (3) drinks containing artificial flavours and preservations
 - (4) All of the above
17. The superiority of neem as a preside is based upon the fact that neem products
 - (1) are easy to use
 - (2) are easily produced
 - (3) kill only pesticides
 - (4) are biodegradable
18. The author’s ecological perspective on industries postulates that
 - (1) NGOs should monitor the environmental angle of industrial activity.
 - (2) Governmental influence on industrial awareness about environmental matters needs to be stepped up
 - (3) Industries should bear the burden of cleaning their effluents.
 - (4) Industries should switch over to natural products while manufacturing products.
19. Which of the following has not been covered by the author?
 - I. global warming
 - II. noise pollution
 - III. water pollution
 - (1) I and II
 - (2) Only II
 - (3) Only III
 - (4) II and III

20. The author's passage can be said to be an attempt at
(1) analysis (2) expression of despair
(3) intellectual pursuit (4) exhortation

Directions: Choose the word which is most nearly the SAME in meaning as the word or group of words given in capitals in each question.

21. STABLE
(1) Uniform (2) Fluctuating (3) Permanent (4) Unwavering
22. EXPLICIT
(1) Clean (2) Implied (3) Obvious (4) Specifically
23. ADVOCATES
(1) Lawyers (2) Experts (3) Recommends (4) Loyalists.
24. MANAGED
(1) Performed (2) Maneuvered (3) Trained (4) Organised
25. PRETENSIONS
(1) Claims (2) Access (3) Apathy (4) Permissiveness
26. SUBTLE
(1) Innocent (2) Elusive (3) Dangerous (4) Insidious.
27. FAKE
(1) Original (2) Imitation (3) Trustworthy (4) Loyal
28. INFAMY
(1) Dishonour (2) Glory (3) Integrity (4) Reputation
29. REPEAL
(1) Sanction (2) Perpetuate (3) Pass (4) Cancel
30. EMBEZZLE
(1) Misappropriate (2) Balance
(3) Remunerate (4) Clear
31. CORPULENT
(1) lean (2) Gaunt (3) Emaciated (4) Obese
32. AUGUST
(1) Common (2) Ridiculous (3) Dignified (4) Petty
33. LAUNCH
(1) Review (2) Begin (3) Propel (4) Push
34. RELIED
(1) Emphasised (2) Depended (3) Convinced (4) Followed

35. OBTAINED
(1) Combined (2) Procured (3) Acquired (4) Followed
36. GARNISH
(1) Paint (2) Garner (3) Adorn (4) Abuse
37. FRUGALITY
(1) Foolishness (2) Extremity (3) Enthusiasm (4) Sparing
38. FORAY
(1) Incursion (2) Contest (3) Ranger (4) Intuition.
39. GARRULITY
(1) Credulity (2) Sensility
(3) Loquaciousness (4) Speciousness
40. FURORE
(1) Excitement (2) Worry (3) Flux (4) Anteroom

Directions: Pick out the most effective word from the given words to fill in the blank to make the sentence meaningfully complete.

41. Indications are that the Government is to the prospect of granting bonus to the striking employees.
(1) Aligned (2) Obligated (3) Reconciled (4) Relieved
42. Shivalal classical music. He always prefers Bhimsen Joshi to Asha Bhosale and Pundit Jasraj to Kumar Sanu.
(1) Adores (2) Apprehends (3) Encompasses (4) Cultivates
43. As a general rule, politicians do not centrestage.
(1) Forward (2) Forbid (3) Forgive (4) Forsake
44. The study on import of natural gas from Iran through a pipeline would be completed shortly.
(1) Natural (2) Calculated (3) Economic (4) Feasibility
45. His party is solely to be blamed for the political in the country.
(1) Devaluation (2) Revival (3) Advocacy (4) Stalemate
46. We still have not given our to conduct the survey of natural resources in our state.
(1) Projection (2) Consent (3) Request (4) Compliance
47. We cannot go on strike every year. Now that we have gone on strike we must this issue.
(1) Clinch (2) Culminate (3) Cross (4) Canvass
48. Man is a/an creature ; however, he is more in need of mental companionship than of physical companionship.
(1) Egoistic (2) Biological (3) Emotional (4) Gregarious

49. He is the best man for this job. He has mental to carry it out.
(1) Predilection (2) Durability (3) Adroitness (4) Persuasion
50. I was totally by his line of thinking and could not put forth any argument.
(1) Demolished (2) Non-plussed (3) Exhausted (4) Refuted

Directions: In the following questions choose the word which is most OPPOSITE in meaning of the word given in capitals.

51. PERNICIOUS
(1) Innocuous (2) Healthy (3) Hygienic (4) Fine
52. CAPTIVATED
(1) Repelled (2) Seized (3) Free (4) Enchanted
53. OVERT
(1) Unambiguous (2) Concealed
(3) Manifest (4) Inexplicable
54. SUBSTANTIAL
(1) Extensive (2) Independent (3) Manifest (4) Minimal
55. LATENT
(1) Concealed (2) Real (3) Apparent (4) Dubious
56. DAZZLING
(1) Glaring (2) Unscrupulous
(3) Unexposable (4) Unnoticeable
57. REPRESS
(1) Inhibit (2) Liberate (3) Curb (4) Quell
58. TANGIBLE
(1) Ethereal (2) Concrete (3) Actual (4) Solid
59. ZENITH
(1) Acme (2) Top (3) Nadir (4) Pinnacle
60. VANITY
(1) Pride (2) Humility (3) Conceit (4) Ostentation

SECTION 2

1. Match the following. Column-I represents information technology companies and Column-II their promoters.

Column-I

- A. HCL Tech
- B. i2 Technology
- C. Sycamore

Column-II

- i. Shiv Nader
- ii Sanjeev Sidhu
- iii. Gururaj Deshpande

Choose the answer from the following choices:

- (1) A-iii, B-ii, C-i
 - (2) A-i, B-ii, C-iii
 - (3) A-iii, B-i, C-ii
 - (4) A-i, B-iii, C-ii
2. Jack Welch is considered to be an all time best CEO. He retired as the chief executive officer of
- (1) Ford Motors
 - (2) Daimler Crysler
 - (3) General Electric (GE)
 - (4) none of these
3. D R Mehta is the former chairman of
- (1) SBI
 - (2) Maruti Udyog Ltd (MUL)
 - (3) Sebi
 - (4) none of these
4. Euro-I, Euro-II, Euro-III norms are related to
- (1) automobile engine
 - (2) computer chips
 - (3) auto fuel
 - (4) none of these
5. Which among the following companies is/are operating in the field of FMCG (fast moving consumer goods)?
- (A) HLL (B) P&G (C) Britannia (D) Nirma
- Choose the answer from the following choices:
- (1) A&B
 - (2) A, B and C
 - (3) A, B and D
 - (4) All of these
6. Which among the following provides estimates for gross domestic product (GDP) of India?
- (1) National Sample Survey (NSS)
 - (2) Indian Statistical Institute (ISI)
 - (3) Central Statistical Organisation (CSO)
 - (4) None of these
7. Fiscal deficit refers to the
- (1) final revenue deficit of the government
 - (2) actual deficit of the government
 - (3) deficit related to non-tax revenue
 - (4) none of these
8. Service tax is a
- (1) direct tax
 - (2) indirect tax
 - (3) regressive tax
 - (4) progressive tax
9. Tadao Chino is the present president of the
- (1) UNESCO
 - (2) UNDP
 - (3) Asian Development Bank (ADB)

- (4) World Bank
10. On which among the following dates the Tenth Plan has/had taken off?
 (1) April 1,2002 (2) July 1,2002
 (3) October 1,2002 (4) April 1,2003
11. Which among the following states for the first time has removed the veil of secrecy over budget preparation and released the 'draft budget' for the year 2002-03 for public debate?
 (1) Karnataka (2) Andhra Pradesh
 (3) Orissa (4) Chhattishgarh
12. Which among the following states is first to introduce tele-agriculture to enable the state's farmers to refer their problems to experts on phone without paying any charge?
 (1) Karnataka (2) Andhra Pradesh
 (3) Orissa (4) Haryana
13. Which among the following nations is/are not members of the OECD?
 (A) India (B) China
 (C) Japan (D) Germany
 Choose the answer from the following choices:
 (1) A, B (2) B, C
 (3) A (4) A, C
14. Which among the following cities was the venue for the fourth ministerial meet of the WTO?
 (1) Singapore (2) Seattle
 (3) Doha (4) Mexico
15. Which among the following nations is the richest nation in the Arab world?
 (1) United Arab Emirates (2) Saudi Arabia
 (3) Qatar (4) Kuwait
16. Which among the following companies has recently launched the 'Victor', an indigenously developed motorbike?
 (1) Bajaj (2) Escorts (3) TVS (4) None of these
17. Which among the following bikes is not owned by TVS-Suzuki?
 (1) Boxer (2) MAX R (3) Samurai (4) Fiero
18. Which among the following companies is the manufacturer of anti-impotency drug Penegra?
 (1) Zydus Cadila (2) Glaxo Smith Kline
 (3) Cipla (4) None of these
19. Match the following. Column-I represents companies and Column-II hospitality groups promoted by them.
- | | |
|-----------------|---------------------|
| Column-I | Column-II |
| (a) Tata | i. East India Hotel |
| (b) Oberoi | ii. Taj group |
| (c) ITC | iii. Welcome group |
- Choose the answer from the following choices:

30. Market capitalisation of a company refers to
 (1) face value of a share multiplied by the number of shares floated
 (2) market value multiplied by the number of subscribed shares
 (3) book value multiplied by the number of authorised shares
 (4) none of these
31. Which among the following company/entity has a majority stake in the West Bengal-based Haldia Petrochemicals Ltd (HPL)?
 (1) Purnendu Chatterjee (2) Tata group
 (3) West Bengal government (4) TOC
32. Match the following, Column-I represents automobile companies and Column-II their brands.
- | Column-I | Column-II |
|----------------------|------------------|
| (A) Hindustan Motors | i. Alto |
| (B) Fiat | ii. Contessa |
| (C) Maruti Udyog | iii. Siana |
| (D) Honda | iv. Accord |
- Choose the answer from the following choices:
 (1) A-i, B-ii, C-iii, D-iv (2) A-ii, B-iii, C-i, D-iv
 (3) A-i, B-ii, C-iv, D-iii (4) A-iv, B-iii, C-ii, D-i
33. 'Peso' is 'the currency of which among the following countries?
 (1) Argentina (2) Peru
 (3) Mexico (4) None of these
34. Which among the following persons has been named the 2001 FIFA 'World Player of The Year'
 (1) Rivaldo (2) Zinedine Zidane
 (3) Luis Figo (4) None of them
35. Hindustan Motors Ltd (HM) is India's oldest automobile company. The company belongs to
 (1) C K Birla group (2) A V Birla group
 (3) K K Birla group (4) none of these
36. Mitsubishi, a Japanese company, has a tie up with which among the following Indian automobile companies?
 (1) Telco (2) Bajaj Auto
 (3) Hindustan Motors (HM) (4) None of these
37. Which among the following companies is a world's largest maker of mobile phones?
 (1) Nokia (2) Ericsson
 (3) Vodafone (4) None of these
38. Cyber port, a high-technology industrial park, is being built up on model of Silicon Valley in
 (1) Bangalore (2) Hyderabad (3) Beijing (4) Hong Kong
39. Global depository receipts are a form of
 (1) debenture (2) bonds
 (3) equity shares (4) none of these
40. Buy back of shares is meant for

- (1) public limited companies but not in India
 (2) public limited companies in India
 (3) only American companies
 (4) none of these
41. Merger and acquisition is implemented by companies those target
 (1) expansion and growth (2) name and fame
 (3) labour intensive production (4) capital intensive production
42. Par value system of shares is
 (1) no more applicable in India
 (2) applicable in India
 (3) applicable in India in selected cases
 (4) none of these
43. Department stores are those
 (1) attached to the government departments
 (2) run by the various departments of the government
 (3) large stores consisting of a number of departments under the same roof
 (4) none of these
44. US GAAP is associated with
 (1) ranking of companies (2) accounting practices
 (3) health services (4) none of these
45. At which among the following prices, Indian GDP is estimated by the Central Statistical Organisation?
 (A) Constant prices (B) Current prices
 (C) Historical prices
 Choose the answer from the following choices:
 (1) A, B (2) A, B and C
 (3) B,C (4) None of these
46. During which among the following plan period Indian GDP had registered the highest growth?
 (1) Sixth Plan (2) Seventh Plan
 (3) Eighth Plan (4) Ninth Plan
47. Disinvestments refers to
 (1) reimbursement of investment
 (2) withdrawal of investment
 (3) further investment
 (4) none of these
48. CII is a
 (1) public limited company (2) private limited company
 (3) industrial apex body (4) none of these
49. The fiscal policy of India is formulated by the
 (1) Planning Commission (2) ministry of finance
 (3) Reserve Bank of India (RBI) (4) none of these

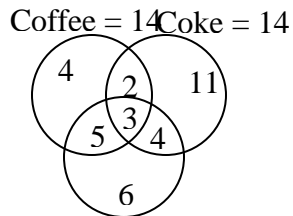
50. The monetary policy of India is formulated by the
- | | |
|---------------------------|-------------------------|
| (1) Reserve Bank of India | (2) ministry of finance |
| (3) Planning Commission | (4) none of these |

SECTION 3

- A spherical balloon is inflated and its radius is increasing at 4 cm/second. At what rate would the volume be increasing when its radius is 14cm?
(1) $(56)^3$ cm³/sec (2) 9856 cm³/sec
(3) 10,000cm³ /sec (4) None of these
- When $(629)^{24}$ is divided by 21, find the remainder.
(1) 1 (2) 2 (3) 5 (4) 11
- If $\frac{a \cdot b}{a \cdot b} \cdot \frac{(a \cdot b)^3}{(a \cdot b)^3}$, what set(s) of a and b is/are correct?
A. $S_1 = \{a = \text{any real value}, b = 0\}$
B. $S_2 = \{a = 0, b = \text{any real value}\}$
C. $S_3 = \{a = 0, b = 0\}$
(1) Only A (2) Only B
(3) Only A and B (4) All A, B and C
- Which of the following is the lowest?
(1) $30^2 - 12^2 - 3^2$ (2) $35^2 - 14^2 - 6^2$
(3) $30^2 - 10^2 - 5^3$ (4) $33^2 - 17^2 - 1^2$
- a, b and c are the sides of a triangle. Equations $ax^2 + bx + c = 0$ and $3x^2 + 4x + 5 = 0$ have a common root. Then angle C is equal to
(1) 60° (2) 90° (3) 120° (4) None of these
- Sum of all prime numbers less than 50 is
(1) more than 500 (2) less than 200
(3) a prime number (4) an even number
- $N = abc$ is a three-digit number, a, b and c being their respective digits. N is a perfect square of an even number. To find N which of following informations is/are necessary/sufficient?
A. a, b, c are three consecutive digits but not in order.
B. N is divisible by 18.
C. Units digit of N^2 is c.
(1) Only A and B together are sufficient
(2) A and C together are sufficient
(3) Only B and C together are sufficient
(4) Either A and C together or B and C together are sufficient
- Let x, y, z be three positive integers satisfying $y = 3x, z = 4x, x + y + z = 3k$, k is an integer. Which of the following is the smallest value of k for which x, y, z are even number?
(1) 8 (2) 10 (3) 12 (4) 16

9. $N = aebfcg$ is a six-digit number where a, b, c, e, f, g are six digit;
 If $a = e, b = f$ and $c = g$ then which of the given informations is not correct?
- (1) If $g = 4$ then N is divisible by 44.
 - (2) If $a + b + c = 6$ then N is divisible by 33.
 - (3) If $g = 8$, then for different values of a, b, c and e, N may be a perfect square
 - (4) If $b = c = 0$, then N is not a perfect square.
10. $N = abcd$ is a four digit number and $M = xyz$ is a three-digit number. $N \cdot M$ is
- (1) a five digit number when $a = x = 1$
 - (2) a six digit number when $a = 3$ and $x = 3$
 - (3) a seven digit number when $a = 6$ and $x = 2$
 - (4) an eight digit number when $a = b = c = d = x = y = z = 9$
11. $N = (A7A)^{17}$ is a perfect square. Which of the following statement is FALSE?
- (1) A is an even digit.
 - (2) A is divisible by 3
 - (3) When N is divided by 13 we get remainder 3.
 - (4) None of these

Directions Q. 12 - 13: Read the following information carefully and answer the questions given below.

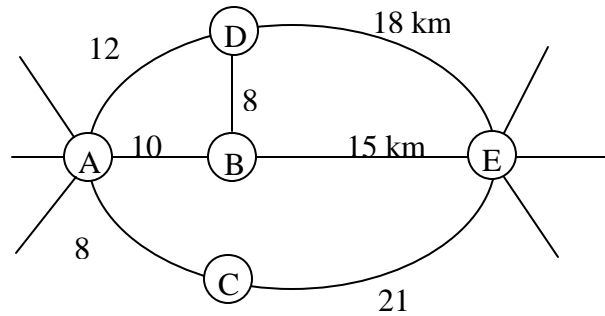


The above diagram shows the liking of Tea and coffee(hot drink) and coke (cold drink) among students in a particular class. This diagram is based on the survey conducted in the month of February.

12. When another survey was conducted in June among the same students the result was different. All of them liked Coke. 12 liked Tea, but no one liked Coffee. How many students liked only Coke?
- (1) 40
 - (2) 23
 - (3) 20
 - (4) 11
13. When another survey was conducted in December among the same students, the result was again different. All of them liked at least one hot drink. 16 liked Coke. No one liked all the three drinks. Which of the following conclusions is true?
- (1) No one liked Coke and Coffee.
 - (2) Some liked Coke and Tea.
 - (3) Number of students who liked both Tea and Coffee is less than 20.
 - (4) Only 10 liked both Tea and Coffee.

14. A mother purchase three shirts of the same color but of different size for her three sons. All the three shirts were kept in a box in a dark room. The three boys took one shirt each at random from the box. What is the probability that none of the boys this own shirt?
 (1) $\frac{1}{2}$ (2) $\frac{1}{3}$ (3) $\frac{2}{3}$ (4) $\frac{1}{4}$
15. Product of three consecutive numbers is 2730. What is the sum of three numbers?
 (1) 39 (2) 42 (3) 45 (4) None of these

Directions Q. 16 – 18: Read the following information carefully and answer the questions given below.



The above figure shows the roadmap plan of 5 towns A, B, C, D and E. The computerised car has the software of this roadmap plan in its computer. To follow the route the driver has to feed instructions. Not necessarily all of the instructions at one time, into the computer. One instruction can be used for more than one time in a single set of instructions. The three types of instructions are as follows:

Instructions Type	Explanations of instructions
GOTO (X, Y)	The car is instructed to move from x to y through shortest route.
ROUTE (X, Y, Z)	The car is instructed to move from X to Z via the town Y; Y is situated on the shortest route from X to Z.
BACK (X, Y)	The car is instructed to go from X to Y and back to X through shortest route.

16. A person lives in town A. He has to reach E. He wants to visit all the other three towns. What set of instructions should he feed into the computer so that he travels the minimum distance?
 (1) GOTO (A, D), GOTO (D, B), GOTO (B, A) ROUTE (A, C, E)
 (2) BACK (A, C), ROUTE (A, D, B), GOTO (B, E)
 (3) BACK (A, C), GOTO (A, D), GOTO (D, B) GOTO (B, E)
 (4) None of these
17. Mr. Goswami lives in town B. He has to go to town C. he wants to visit all the other three towns. He plans his routes such that he can travel for minimum distance. Find the minimum of instructions to be fed into the computer.
 (1) 3 (2) 4 (3) 5 (4) None of these

18. The direct road from A to D is destroyed to flood. A person wants to use the computerised car to go from A to D. which of the three set of instructions can't be used by him?
- (1) ROUTE (A, B, E) , GOTO((E, D)
 - (2) GOTO (A, B), GOTO (B, D)
 - (3) ROUTE (A, C, E) , GOTO (E, D)
 - (4) None of these
19. A circle is inscribed in a regular octagon. The same circle circumscribes a regular hexagon. Find the ratio of the areas of the circle, the hexagon and octagon.
- (1) $2\sqrt{3} : 3\sqrt{3} : 16(\sqrt{2} - 1)$
 - (2) $\sqrt{3} : 3\sqrt{3} : 4(\sqrt{2} - 1)$
 - (3) $2\sqrt{3} : 2\sqrt{3} : 4(\sqrt{2} - 1)$
 - (4) None these.
20. Find the remainder when $N = 1821? 1823? 1827$ is divisible by 12.
- (1) 9
 - (2) 12
 - (3) 15
 - (4) 18

Directions: Q 21 - 25: are based on the following:

Sun Ltd. and Star Ltd. are two rivals always trying to outdo each other. The following table gives the payoffs for Sun Ltd. for various strategies that they adopt and the corresponding strategies adopted by Star Ltd. e.g. If Sun Ltd. adopts strategy B, and Star Ltd. adopts strategy A, then Sun Ltd. gains 6000 while Star Ltd. loses 6000. In addition to this, for implementing any particular strategy, both have to incur certain expenses, which are given in the table "Expenses".

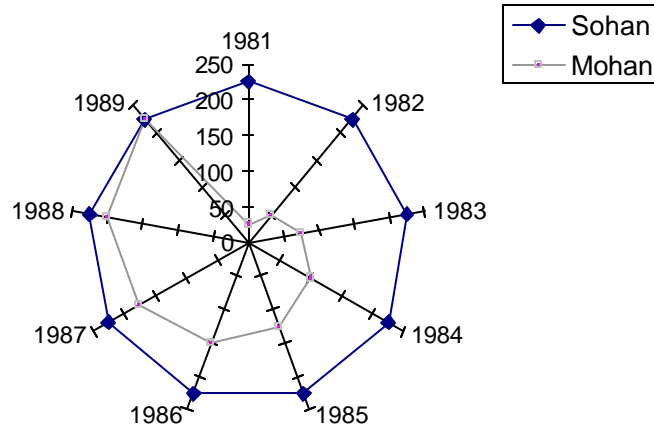
Payoffs for Sun Ltd.				
	Strategy	Star Ltd.		
		A	B	C
	A	8000	12000	8000
Sun Ltd.	B	6000	- 2000	0
	C	8000	16000	4000
Expenses				
Strategy		A	B	C
Star Ltd.		7000	8000	8000
Sun Ltd.		8000	2000	8000

21. If Star Ltd. adopts strategy A, which strategy should Sun Ltd. adopt for maximum gain?
- (1) A
 - (2) B
 - (3) C
 - (4) A or C
22. If Star Ltd. adopts strategy B, what is Sun Ltd.'s maximum possible gain?
- (1) 10000
 - (2) 0
 - (3) 12000
 - (4) None of these
23. If Sun Ltd. adopts strategy B, what strategy should Star Ltd. adopt to minimise Sun's gain, regardless of what its own gain will be?
- (1) A
 - (2) B
 - (3) C
 - (4) A or C
24. Of the following, which would be the most intelligent move on the part of Star Ltd?
- (1) If Sun Ltd. adopts strategy A, adopt strategy B.
 - (2) If Sun Ltd. adopts strategy B adopt strategy B.
 - (3) If Sun Ltd. adopts strategy C adopt strategy B.
 - (4) If Sun Ltd. adopts strategy C adopt strategy A.

25. If both the companies adopt strategy C, then which of the following is true?

- I. Star Ltd.'s net loss is 12000.
 - II. Sun Ltd.'s gain is 4000.
 - III. Sun Ltd.'s loss is 4000
- (1) I only (2) I & III (3) II only (4) III only

Directions Q. 26 - 30: Refer to the diagram given below:



MARKS OBTAINED BY TWO STUDENTS

26. Sohan's average for the first six years was:
- I. equal to that of the last six years.
 - II. equal to that of the middle six years.
 - III. 225
- (1) III only (2) I & III (3) I, II & III (4) II & III
27. When was Mohan's score exactly half of Sohan's in the given nine years?
- (1) 1984 (2) 1985 (3) 1986 (4) never
28. How can Mohan's scoring pattern be best described?
- (1) It increases by 50% every year.
 - (2) It increases by 25% every year.
 - (3) It increases by 50 every year.
 - (4) It increases by 25 every year.
29. What is the difference between the total scores of Mohan and Sohan?
- (1) 700 (2) 825 (3) 900 (4) 225
30. In how many of the given years was Sohan's score exactly thrice that of Mohan's score?
- (1) one (2) two (3) three (4) four

Directions Q. 31 - 35: The table shows the raw material requirements for a crank-shaft machining line of a major automobile manufacturer located in western India:

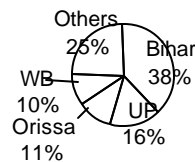
RAW MATERIAL REQUIREMENT (Units)

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Units	50	25	30	20	5	6	2	10	15	20	25	10	5	20	10

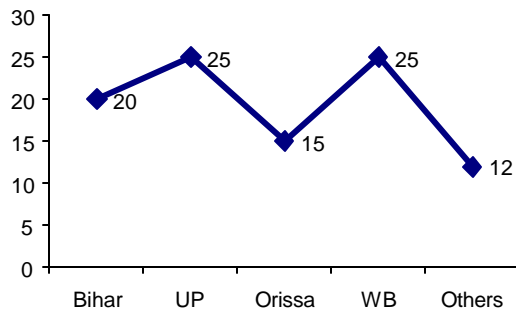
The Company policy requires that adequate raw material has to be maintained at least a day in advance.

31. If the raw material inventory on Day 0 was 165 units, the manager requires to place an order latest by which day?
(1) 8th (2) 9th (3) 10th (4) 11th
32. If the raw material inventory on Day 0 was 73 units and the manager orders for 17, 53 and 86 units on the first, second and fourth day respectively, when does he need to order next?
(1) 10th day (2) 11th day (3) 13th day (4) 14th day
33. If the raw material supplier starts acting fishy and delays his supplies by 48 hrs, then which day's production will be hit if the starting inventory on day 0 is 163 units and an order is placed on the morning of day 7?
(1) None (2) Day 8 (3) Day 9 (4) Day 10
34. If the cost of placing an order is Rs. 650/per order, determine the minimum cost incurred in Q.32 if we consider the whole cycle of 15 days.
(1) Rs. 1,950 (2) Rs. 650 (3) Rs. 2,600 (4) Rs. 3,250
35. If the daily pilferage is 5 units, find the minimum number of units to be ordered through the whole cycle if we start with an inventory on Day 0 of 100 units? (assume that we end with zero inventory)
(1) 296 (2) 153 (3) 75 (4) 228

Directions Q. 36 - 40: The following pie - chart shows the percentage of students passed in an examination from different parts of the country in 1999.



The following graph shows the percentage of students who passed their graduation (freshers) in 1999.



36. If in 1999 the total passed candidates from different parts of the country was 650, then how many non fresher candidates from Bihar passed the examination in 1999?
 (1) 200 (2) 195 (3) 198 (4) 204
37. If in 1999 the total number of freshers from WB was 160, then how many non - fresher candidates passed the exam from others?
 (1) 1398 (2) 1588 (3) 1608 (4) 1408
38. If total passed candidates from UP in 1999 was 112, what is the ratio between the number of freshers from Bihar and that of non - freshers from Orissa?
 (1) 760 : 187 (2) 187 : 760 (3) 40 : 11 (4) None of these
39. If there is an increase of 10% and 20% candidates from Bihar and Others in the year 2000 respectively, and the number of total passed candidates from Orissa in 1999 was 77, what would be the approximate total passed candidates from Bihar and Others in 2000?
 (1) 210 (2) 480 (3) 450 (4) 500
40. If the non-fresher candidates from UP in 1999 was 60, how many candidates passed the exam from all parts of the country?
 (1) 500 (2) 300 (3) 350 (4) 450

Directions Q. 41 to 44: are based on the following information:

- Ghosh Babu's new interest is psychology. He has identified various personality patterns and given them names. These personality patterns are inter-related as follows:
- All Alessandras, Belissimas, Cassandras, Desdemonas, Elissimas and Firdauses are Queens.
- All Alessandras are Belissimas.
- No Belissima that is not an Alessandra is a Firdaus.
- Some Cassandras are Alessandras.
- All Desdemonas are Cassandras.
- Some Cassandras are not Belissimas.
- No Desdemona is an Alessandra.
- All Queens and only Queens that are neither Belissimas nor Cassandras are Elissimas.

41. Which of the following is true?
 (1) All Firdauses are Alessandras.
 (2) Some Firdauses are Alessandras.

- (3) All Firdauses are either Alessandras, Cassandras or Elissimas.
 (4) Some Firdauses are Cassandras.

42. Which of the following is not true?
 (1) No Desdemonas are Belissimas.
 (2) Some Belissimas are Desdemonas.
 (3) Some Firdauses are both Belissimas and Cassandras.
 (4) Some Queens are neither Belissimas nor Elissimas.

43. Which of the following cannot be said to be true or false?
 I. No Belissima or Cassandra is an Elissima.
 II. Some Cassandras are Belissimas but not Alessandras.
 III. No Belissima is both an Alessandra and a Desdemonas.
 (1) I only (2) II only (3) III only (4) I & II

44. Peter is not a Belissima, therefore,
 (1) Peter is an Elissima
 (2) If Peter is a Queen, he is an Elissima or Cassandra.
 (3) If Peter is not an Elissima, he is a Cassandra.
 (4) None of the above

Directions: Each of the questions 45- 52 is followed by two statements. As the answer,
 Mark 1, if the question can be answered with the help of statement I alone,
 Mark 2, if the question can be answered with the help of statement II alone,
 Mark 3, if both statement I and statement II are needed to answer the question, and
 Mark 4, if the question cannot be answered even with the help of both the statements.

45. Is line MN perpendicular to the X-axis?
 I. $M = (5, 12)$ II. N lies on the X-axis at a distance of 5 units from the origin.
46. What is the value of x?
 I. $\log_2 2^x = x$ II. $\log_3 x = 0$
47. How much tax did Mrs. X pay?
 I. Gauri paid twice the amount that Rajat did last year.
 II. Rajat paid Rs. 9800 as tax this year.
48. A, B, C and D are points on a straight line. Is $AB = BC = CD$?
 I. $AC = 2 CD$ II. $AB = BC$
49. What is the area of the isosceles trapezium?
 I. Of the two parallel sides, one is 6 cm. smaller than the other.
 II. The line joining the midpoints of the non-parallel sides is 13 cm. in length and is at a distance of 2 cm. from the base.
50. If a and b are integers, is $(a/4 + b/5)$ an integer?
 I. The cube root of a is an even number which is $1/10^{\text{th}}$ the value of b.
 II. a is divisible by 5 and b is divisible by 4.
51. A cube is painted on all sides and is cut into smaller cubes, all of the same size. How many of the smaller cubes do not have any side painted?
 I. 8 of the smaller cubes are painted on the three sides.
 II. The number of smaller cubes is 64.

52. Is x/y prime?
 I. x is divisible by 3 but not by 9
 II. y is a multiple of 6
53. On 1st January 1969, a person purchases Rs. 10,000, 4% debentures. On 1st Jan. 1970, he sells $\frac{3}{4}$ of it at a discount of 6% and invests the proceeds in steel shares at Rs. 470 per share. He sells the remaining debentures at Rs. 105 and purchases bonds at a price of Rs. 75 per bond. Each bond pays Rs. 5. Each share pays Rs. 16. Find the alternation in his annual income in 1970?
 (1) Rs. 15 decrease (2) Rs. 25 increase
 (3) Rs. 15 increase (4) None
54. Which of the following is NOT true?
 (1) $|a + b| = |b + a|$
 (2) $|a - b| = |b - a|$
 (3) $|a + b| < |a| + |b|$
 (4) $|a - b| > |a| - |b|$
55. Find the least number which when divided by 35, 45, and 55 leaves the remainder 18, 28, and 38 respectively.
 (1) 3465 (2) 17 (3) 3449 (4) 3448
56. Between two numbers whose sum is $6\frac{1}{2}$ an even number of arithmetic means is inserted; the sum of these means exceeds their number by unity. How many means are there?
 (1) 12 (2) 6 (3) 24 (4) None
57. A trader buys goods from Delhi to sell in Bombay where he gets 20% higher price realisation. Per journey, he spends Rs. 2000 on travelling, Rs. 2500 as bribe to the parcel authority and makes a net profit of Rs. 20,000. Find the total value of goods purchased by the dealer in 7 journeys to Delhi.
 (1) Rs. 1,22,500 (2) Rs. 2,45,000 (3) Rs. 8,57,500 (4) None
58. A family consists of the father, mother, two sons and the youngest daughter. The age of father is four times the age of the second son. The age of the first son is in the ratio of 3 : 1 with that of his sister. The mother is 3.5 times older than the second son. The age of the second son is $\frac{2}{3}$ times of the first son. The age of the youngest daughter is 5 years. Find the sum of all the ages.
 (1) 115 yrs (2) 105 yrs (3) 205 yrs (4) 210 yrs
59. A can do a piece of work in 36 days, B in 54 days and C in 72 days. All of them began together but A left 8 days and B left 12 days before the completion of the work. How many days in all did C put in till the entire work was finished?
 (1) 48 days (2) 24 days (3) 12 days (4) None
60. A person travels through 5 cities - A, B, C, D, E. Cities E is 2 km west of D. D is 3 km north-east of A. C is 5 km north of B and 4 km west of A. If this person visits these cities in the sequence B - C - A - E - D, what is the effective distance between cities B and D?
 (1) 13 km (2) 9 km (3) 10 km (4) 11 km

ESSAY TOPIC:

Discuss the following statement in the space provided (1 page was given separately to give the response)

Asked at the age of 83, as to which of his project would he choose as his master- piece, Frank Lloyd Wright the architect answered “The next one”

SOLUTION

SECTION 1

1. (4) 2. (1) 3. (3) 4. (2) 5. (3) 6. (4) 7. (1) 8. (3) 9. (2) 10. (3)
11. (4) 12. (1) 13. (2) 14. (3) 15. (1) 16. (4) 17. (3) 18. (3) 19. (4) 20. (1)
21. (4) 22. (4) 23. (3) 24. (4) 25. (1) 26. (2) 27. (2) 28. (1) 29. (4) 30. (1)
31. (4) 32. (3) 33. (2) 34. (2) 35. (2) 36. (3) 37. (4) 38. (1) 39. (3) 40. (1)
41. (3) 42. (1) 43. (4) 44. (4) 45. (4) 46. (2) 47. (1) 48. (4) 49. (3) 50. (2)
51. (2) 52. (3) 53. (3) 54. (4) 55. (3) 56. (4) 57. (2) 58. (1) 59. (3) 60. (2)

SECTION 2

1. (2) 2. (3) 3. (3) 4. (3) 5. (4) 6. (3) 7. (2) 8. (2) 9. (3) 10. (1)
11. (2) 12. (4) 13. (1) 14. (3) 15. (3) 16. (3) 17. (1) 18. (1) 19. (2) 20. (4)
21. (4) 22. (2) 23. (3) 24. (1) 25. (3) 26. (3) 27. (1) 28. (4) 29. (2) 30. (2)
31. (1) 32. (2) 33. (3) 34. (3) 35. (1) 36. (3) 37. (1) 38. (3) 39. (3) 40. (4)
41. (1) 42. (1) 43. (3) 44. (2) 45. (1) 46. (3) 47. (2) 48. (3) 49. (2) 50. (1)

SECTION 3

1. (2) 2. (1) 3. (3) 4. (1) 5. (2) 6. (4) 7. (4) 8. (4) 9. (3) 10. (3)
11. (3) 12. (2) 13. (3) 14. (2) 15. (2) 16. (3) 17. (1) 18. (3) 19. (1) 20. (1)
21. (2) 22. (4) 23. (2) 24. (2) 25. (2) 26. (3) 27. (4) 28. (4) 29. (3) 30. (1)
31. (2) 32. (3) 33. (1) 34. (3) 35. (4) 36. (3) 37. (4) 38. (4) 39. (4) 40. (1)
41. (3) 42. (1) 43. (2) 44. (2) 45. (4) 46. (2) 47. (4) 48. (3) 49. (2) 50. (1)
51. (2) 52. (4) 53. (3) 54. (3) 55. (4) 56. (1) 57. (3) 58. (2) 59. (2) 60. (1)