

## English

### Read the given extract and answer questions 1 to 5

The avant-garde of this century envisions the possibility of realistically conceiving a world in which hierarchy, whether open or closed, has finally dissolved because the condition presupposed by these two models of society, the condition of material scarcity, is no longer a tragic inevitability. The avant-garde insists on a transformation of social and cultural practice that will not end in the substitution of a new elite for an old one, a new protocol of domination of the earlier ones, nor the institutions of new privileged positions for old ones ? whether of privileged positions in space (as in the old perspectival painting and sculpture), or of privileged positions in culture (on the basis of a presumed superior taste). The practitioners of the humanities know about paratactical styles, and they fear them, not least because they deny the need for critics. Paratactical conventions try to resist any impulse to the hierarchical arrangement of images and perceptions and, as the roots of the word parataxis indicate, sanction their arrangement together side by side, that is to say, indiscriminately, by simply listing in sequence, in what might be called a democracy of lateral coexistence, one next to another. It represents a class of stylistic conventions ideally suited to the representation of a world in which hierarchy, subordination and domination, tragic conflict, and psychic scarcity are conceived to have been transcended. Paratactical conventions in thought and art have been recessive or subdominant strains in Western culture, at least since the Renaissance. And all previous mannerist movements are probably correctly viewed as manifestations of imperfectly repressed religious feelings or reflections of a mythic belief in fate or destiny that may still be present with us all. But, equally, it may well be that this conception of the historical function of the paratactical imagination is inadequate for an understanding of the current cultural rebellion against tradition, fiction, and perception and the combination of them that has sustained realism throughout its long history. And for this reason: paratactical style is an intrinsically communal style, rather than a societal one; it is inherently democratic and egalitarian rather than aristocratic and elitist, and that it is possible that the rebirth of parataxis in art and thought in this century does not represent the fall back into myth or the advent of a new totalitarianism so much as the demand for a change of consciousness that will finally make a unified humanity possible. For although there is much that is merely exotic and perhaps even pathological in contemporary avant-garde art and utopian thought, what is characteristic of its best representatives, Joyce and Yeats on down to the Resnais, Robbe-Grillet, Cage, Merce Cunningham, Beckett, and the rest is a seeming ability to live with the implications of a paratactical consciousness: a language of linear disjunctions rather than narrative sequences, of deperspectivized space, and of definalized culminations without any need for that mythic certitude that has always attended the flowering of such a consciousness in the past. And this may indicate that the current avant-garde is able to take as a fact what every previous one had to regard finally as only hope, that is, the condition of material scarcity is no longer an inevitability and that at last we are ready to enter into a utopia in which neither myth, religion, nor elites of taste and sensibility will be able to claim the right to define what the true aims of either art or life must be.

**Q1 :** Which of the following does the avant-garde believe of hierarchical world?

- A** such a world never existed
- B** the hierarchical world has now become irrelevant
- C** the hierarchical world was occasioned mainly by material abundance
- D** the hierarchical world dissolves when the model of open/closed society thrives

**Q2 :** What social and cultural practice does the avant-garde want to change?

- A** the hegemony of the upper classes
- B** corruption in art and music
- C** the organization of reality into relationships of subordination and domination
- D** a blind adherence to tradition

**Q3** : Which of the following changes will the avant-garde resist?

- A** the 'groove thinking' that replaces the old system of values with another such system which may be new
- B** the establishment of an open model of society
- C** the dismantling of the old closed model of society
- D** the movement that encourages a return to Nature

**Q4** : Why do practitioners of the humanities fear 'paratactical styles'? Paratactical styles

- A** repudiate a way of viewing reality
- B** represent stylistic conventions of pop culture
- C** do not subject themselves to any kind of appraisal
- D** lead to an indiscriminate sequential arrangement

**Q5** : Which of the following best describes the passage as whole?

- A** A descriptive history of the art movement
- B** A view of the paratactical convention
- C** A critique of the position of the avant-garde
- D** An analysis of art, religion, myth and tradition

**Q6** : Complete the sentence with the best of the given alternatives.

According to a study, hunger is concentrated in poor, underdeveloped countries, out of sight of the 70 million Americans who:

- A** are overweight from eating too much.
- B** are being overweight from eating too much.
- C** have been overweight from eating too much.
- D** were being overweight from eating too much.

**Q7** : A Hyperbole employs:

- A** Exaggeration
- B** Sarcasm
- C** Satire
- D** Understatement

**Q8** : Pick out an appropriate synonym for the given word EXIGUOUS

- A** burdensome
- B** explanatory
- C** meagre
- D** massive

**Q9** : Pick out an appropriate antonym for the given word EQUABLE

- A** steady
- B** agitated
- C** unemotional
- D** smooth

**Q10** : Fill in the blanks with the correct alternative She is a bit timid and has not yet \_\_\_\_\_ the courage to apply for the job

- A** put on
- B** caught up with
- C** carried through
- D** picked up

**Q11** : Fill in the blanks with the correct alternative  
Magicians are essentially trying to \_\_\_\_\_ us into thinking something supernatural is going on

- A** deceive
- B** conjure
- C** trick
- D** cheat

**Q12** : Elegy means:

- A** A narrative celebrating heroic events
- B** A poem of mourning
- C** A song of praise
- D** A story in which characters represent particular qualities or ideas.

**Q13** : Fill in the blanks with the correct alternative Joe confessed \_\_\_\_\_ stealing the money

- A** on
- B** at
- C** with
- D** to

**Q14** : Fill in the blanks with the correct alternative  
Varun could talk the hind legs of a \_\_\_\_\_

- A** donkey
- B** horse
- C** parrot
- D** cat

**Q15** : Only one of the following sentences is grammatically correct. Pick out the correct sentence

- A** The Secretary and his personal assistant is starting the investigation
- B** The Secretary with his personal assistant is starting the investigation
- C** The Secretary along with his personal assistant is starting the investigation
- D** The Secretary besides his personal assistant is starting the investigation

**Q16** : Only one of the following sentences is grammatically correct. Pick out the correct sentence

- A** The inflammation of the sinuses is called as sinusitis
- B** Yuvraj Singh came to be regarded as a hero after he hit six sixes in one over
- C** A R Rahman is considered as a genius in the field of music
- D** The act by which an individual kills his father is termed as patricide

**Q17** : Pick out the incorrect sentence

- A** Because Hari was injured, he was unable to play
- B** Hari was injured; he was unable to play
- C** Hari was injured, he was unable to play
- D** Hari was injured. He was unable to play

**Q18** : Choose the best ANTONYM for the capitalized word in the given lines.

"Words are like leaves and where they most **ABOUND**,  
Much fruit of sense beneath is rarely found."

- A** Lessen
- B** Adhere
- C** Gather
- D** Multiply

**Q19** : Choose the most appropriate question tag for the following sentence.

Let's go to the beach,-----?

- A** Can we?
- B** Can't we?
- C** Shall we?
- D** Isn't it?

**Q20** : Fill in the blanks with the correct alternative:

I am not surprised that their phone bill is so high the way they \_\_\_\_\_ on.

- A** goose
- B** parrot
- C** rat
- D** rabbit

**Q21** : In the given sentence the parts in CAPITALS are labelled A, B, C, D. Identify the part that contains an error.  
The PERSPIRATION PORED FROM Sunil after he HAD FINISHED his ARDUOUS WORKOUT IN THE GYM.

**A** PERSPIRATION PORED FROM

**B** HAD FINISHED

**C** ARDUOUS WORKOUT

**D** IN THE GYM

**Q22** : Fill in the blank with the correct alternative:  
Uma's \_\_\_\_\_ at the party was obvious after rain had spoilt her new saree.

**A** discontentment

**B** discomfiture

**C** discordance

**D** disillusionment

**Q23** : Pick out the INCORRECT sentence.

**A** My bronchitis is blamed on bad weather.

**B** Bad weather is blamed for my bronchitis.

**C** A bad workman always blames his tools.

**D** The airport authorities were not to blame for the security lapse.

**Q24** : Pick out the correct passive construction of the following sentence:  
'Someone has taken all the flowers from the garden'.

**A** All the flowers from the garden have been taken.

**B** All the flowers from the garden were being taken.

**C** All the flowers from the garden has been taken.

**D** All the flowers were taken from the garden.

**Q25** : Which of the following pairs does NOT rhyme?

**A** Indict / verdict

**B** Number / lumber

**C** Phase / faze

**D** Chased / chaste

**Q26** : Which one of the following word pairs is similar to:  
'sorrowful: lugubrious'

**A** Credible: incredible

**B** Luscious: delicious

**C** Artificial: artful

**D** Cheerful: euphoric

**Q27** : Which one of the following word pairs is similar to:  
'Touch: push'

**A** Translucent: opaque

**B** Sip: gulp

**C** Glass: water

**D** Water: milk

**Q28** : Pick the odd one out.

**A** Willy nilly

**B** Happy clappy

**C** Toy boy

**D** Ping pong

**Read the given extract and answer questions 29 to 33**

These few precepts in thy memory  
See thou character. Give thy thoughts no tongue,  
Nor any unproportioned thought his act:  
Be thou familiar, and by no means vulgar.  
Those friends thou hast, and their adoption tried,  
Grapple them to thy soul with hoops of steel;  
But do not dull thy palm with entertainment  
Of each new-hatched, unfledged comrade. Beware  
Of entrance to a quarrel, but being in,  
Bear't that the opposed may beware of thee.  
Give every man thy ear, but few thy voice,  
Take each man's censure, but reserve thy judgement.  
Costly thy habit as thy purse can buy,  
But not expressed in fancy; rich, not gaudy;  
For the apparel often proclaims the man.  
Neither a borrower nor a lender be;  
For loan oft loses both itself and friend,  
And borrowing dulls the edge of husbandry.

**Q29** : The lines in the given extract which are addressed to a young person fall under the category of:

**A** Admonition

**B** Criticism

**C** Chastisement

**D** Entreaty

**Q30** : "Be thou familiar, but by no means vulgar." "Vulgar" in this context means:

**A** Cheap

**B** Indecent

**C** Common

**D** Belittling

**Q31** : "Grapple them to thy soul with hoops of steel" means:

- A** Punish others by binding with hoops of steel
- B** Wrestle with others using hoops of steel
- C** Trap others using hoops of steel
- D** Form bonds of friendship as strong as hoops of steel

**Q32** : The given poem does NOT offer an opinion on:

- A** Friends
- B** Husbands
- C** Clothes
- D** Financial transactions

**Q33** : In the line, "Give every man thy ear, BUT few thy voice", the word in capitals is a:

- A** Participle
- B** Relative Pronoun
- C** Conjunction
- D** Preposition

**Q34** : Pick out the correct sentence from the following:

- A** Hardly I had covered 50 metres when Kiran overtook me and won the race.
- B** No sooner than Uma saw the burglar that he ran away.
- C** Scarcely had I finished the first exercise when the teacher began the next.
- D** How will he finish all these questions is anybody's guess.

**Q35** : Pick out the INCORRECT sentence.

- A** The physician told Manu frequently to exercise.
- B** The physician advised Manu to exercise frequently.
- C** The physician frequently told Manu to exercise.
- D** The physician suggested that Manu exercise frequently.

**Q36** : In the given sentence the parts in CAPITALS are labelled A, B, C, D. Identify the part that contains an error:

The ACCIDENT VICTIM WAS RUSHED to the emergency ward where THE DOCTOR SAW THE PATIENT'S PULSE and DECLARED HIM DEAD.

- A** ACCIDENT VICTIM
- B** WAS RUSHED
- C** THE DOCTOR SAW THE PATIENT'S PULSE
- D** DECLARED HIM DEAD

## Economics

**Q1** : In the floating exchange rate system

- A** The government allows the exchange rate to be determined by the forces of demand and supply
- B** The exchange rate is pegged at a particular level
- C** The central bank intervenes to moderate the exchange rate movement
- D** The balance of payment should always be in surplus

**Q2** : Consider a manufacturing firm which uses natural gas to generate its own electricity to run its equipments. If the price of the natural gas rises due to external pressure, this would lead to

- A** a shift up in the marginal cost, average variable cost and average total cost curves
- B** a shift up in the marginal cost, average variable cost and average fixed cost curves
- C** a shift up in the marginal cost, average total cost and average fixed cost curves
- D** a shift up only in average total cost curve

**Q3** : In the year 1996, the Ginni index of income for Brazil was 60% and that of Hungary was 31%. One can therefore infer that:

- A** Brazil has higher inequality than Hungary
- B** Hungary has higher inequality than Brazil
- C** Brazil has more people below the poverty line than Hungary
- D** Hungary has more people below the poverty line than Brazil

**Q4** : Import substituting industrialization strategy is:

- A** substituting imported goods by domestic production
- B** substituting exported goods by importing
- C** substituting private sector by public sector
- D** substituting one trade partner with another trade partner

**Q5** : If the increase in the price of commodity X leads to the decrease in the quantity demanded of commodity Y, then X and Y are said to be

- A** complementary goods
- B** substitute goods
- C** Luxury goods
- D** Independent goods

**Q6** : A progressive income tax means that those with a higher income pay

- A** a lower percentage of their income in taxes than low income people
- B** the same percentage of income in taxes as low income people
- C** a higher percentage of income in taxes than low income people
- D** a higher amount of tax compared to low income people



**Q7 :** In an economy  $S = -50 + 0.5Y$  is the saving function (where  $S =$  saving and  $Y =$  national income) and investment expenditure is 7000. What would be the equilibrium level of national income?

- A** 10900
- B** 8950
- C** 17900
- D** 20000

**Q8 :** Dual economies are countries

- A** with double capital and labour
- B** with a modern manufacturing sector as well as traditional agricultural sector
- C** that specializes in labour intensive products more than capital intensive products
- D** with foreign owned and domestic owned capital

**Q9 :** The basic features/characteristics of public goods are

- A** Non rivalry and non excludability
- B** Non rivalry and excludability
- C** Rivalry and non excludability
- D** Rivalry and excludability

**Q10 :** Which of the following instrument is not used by RBI to regulate the money supply

- A** by controlling the stock of high powered money
- B** by adjusting the bank rate
- C** by varying the reserve requirements of the commercial banks
- D** by accepting deposits from the general public

**Q11 :** Given the currency deposit ratio (cdr) and reserve deposit ratio (rdr) of 1.0 and 0.2 respectively, if the RBI buys gold worth of Rs 15 million from the suppliers, the total increase in money supply would be

- A** Rs 20 million
- B** Rs 25 million
- C** Rs 30 million
- D** None of the above

**Q12 :** According to the supply side of the vicious circle theory of development, a country is poor because

- A** its technology level does not allow for self financing
- B** it was previously too poor to save and invest
- C** under employment is wide spread
- D** resource allocation is poor

**Q13** : If the supply curve of a commodity is positively sloped, a rise in the price of the commodity, other things being the same, results in:

- A** an increase in supply
- B** an increase in the quantity supplied
- C** a decrease in supply
- D** a decrease in the quantity supplied

**Q14** : In a free enterprise economy the production problem of what, how and for whom is solved by:

- A** a planning committee
- B** the elected representatives
- C** the price mechanism
- D** a benevolent planner

**Q15** : In which of the following states is the sex ratio the most UNFAVOURABLE?

- A** Bihar
- B** Kerala
- C** Haryana
- D** Maharashtra

**Q16** : The contribution of primary and secondary sectors in India's GDP between 2001 and 2007 has been:

- A** primary- increasing and secondary-decreasing
- B** primary-increasing and secondary-increasing
- C** primary-decreasing and secondary-decreasing
- D** both primary and secondary decreasing

**Q17** : The source of maximum energy production in India is:

- A** Nuclear
- B** Thermal
- C** Hydro
- D** Wind

**Q18** : The first phase of Green Revolution was limited to:

- A** wheat growing regions only
- B** wheat and rice growing regions
- C** wheat, rice and commercial crops growing regions
- D** rice growing regions only

**Q19** : Inflation is:

- A** an increase in the overall level of economic activity
- B** an increase in the overall price level
- C** an increase in the price level of food items
- D** an increase in the price level of every item in the consumption basket

**Q20** : The concept of opportunity cost:

- A** would be irrelevant if we eliminated poverty
- B** suggests that a major increase in public health-care spending means an expansion in other areas will be harder to achieve
- C** is relevant only for a developing economy like India
- D** is relevant only for a capitalist economy like the United States

**Q21** : Who among the following was NOT the Governor of the RBI?

- A** Dr. S. Venkitaramanan
- B** Dr. Manmohan Singh
- C** Dr. I.G.Patel
- D** Dr. Montek Singh Ahluwalia

**Q22** : A graph showing the relationship between cumulative percentage of income and cumulative percentage of population is called the:

- A** income distribution curve
- B** Laffer curve
- C** Lorenz curve
- D** income flow curve

**Q23** : Unemployment means that:

- A** people are not willing to work at the going wage rate.
- B** there are some people who will not work at the going wage rate.
- C** at the going wage rate, there are some people who want to work but cannot find work.
- D** there is excess demand in the labour market.

**Q24** : Who authored the celebrated book "The General Theory of Employment, Interest and Money"?

- A** Adam Smith
- B** John Maynard Keynes
- C** David Ricardo
- D** Milton Friedman

**Q25** : The Capabilities Approach for understanding human development was proposed by:

- A** Amartya Sen
- B** Mohammed Yunus
- C** Joseph Stiglitz
- D** Mahbub-ul-Haq

**Q26** : Gadgil formula applies to:

- A** Sharing investments among states
- B** Formula to calculate indirect tax
- C** Sharing tax revenues between central and state governments
- D** Determination of interest rates

**Q27** : Disguised unemployment generally exists in

- A** Urban societies
- B** Manufacturing sector
- C** Small scale industries
- D** Agriculture

### **Current Affairs**

**Q1** : Who among the following started Satyashodhak Samaj?

- A** Jotiba Phule
- B** Dayanand Saraswati
- C** Ramakrishna
- D** Ishwar Chandra Vidyasagar

**Q2** : Sarva Shiksha Abhiyan (SSA) was initiated under the administration of

- A** Mr Vajpayee
- B** Mr Manmohan Singh
- C** Mr Rajiv Gandhi
- D** Mr Narasimha rao

**Q3** : Which of the following universities is the oldest in India?

- A** University of Bombay
- B** Banaras Hindu University
- C** Meerut University
- D** Aligarh Muslim University

**Q4** : Which of the following is NOT an Upanishad?

- A** Isa Upanishad
- B** Mundaka Upanishad
- C** Maha Upanishad
- D** Brihadaranyaka Upanishad

**Q5** : The block level institution in Panchayati Raj system is called:

- A** Panchayat Samiti
- B** Gram Samiti
- C** Panchayat Sabha
- D** Gram Sabha

**Q6** : The collective name of the mascots for the 2008 Beijing Olympics was:

- A** Ying Yang
- B** Lili
- C** Dumin
- D** Fuwa

**Q7** : The Great Wall of China is considered to start from the province of:

- A** Gansu
- B** Qinghai
- C** Inner Mongolia
- D** Xinjiang

**Q8** : Who coined the term 'paradigm shift'?

- A** Thomas Kuhn
- B** Richard Feynmann
- C** John Kenneth Galbraith
- D** Paul Samuelson

**Q9** : The nobel prize in Economics was instituted in the year

- A** 1950
- B** 1920
- C** 1968
- D** 1980

**Q10** : The city of Chandigarh was designed by

- A** Le Corbusier
- B** Edwin Lutyens
- C** Charles Correa
- D** Gaudi

**Q11** : The Calico museum on textile history is in

- A** Bombay
- B** Manchester
- C** Coimbatore
- D** Ahmedabad

**Q12** : Nuclear weapons and use of nuclear energy are governed by which international treaty?

- A** Comprehensive Test Ban Treaty
- B** Nonproliferation Treaty
- C** Partial Test Ban Treaty
- D** Fissile Material Cut-off Treaty

**Q13** : Helvetic Republic is the earlier name of

- A** Belgium
- B** Switzerland
- C** Austria
- D** Denmark

**Q14** : The Kyoto protocol runs out in the year

- A** 2010
- B** 2011
- C** 2012
- D** 2013

**Q15** : Who of the following is NOT a communist leader?

- A** Fidel Castro
- B** Deng Xiaoping
- C** Ho Chi-Minh
- D** Shimon Peres

**Q16** : Who wrote "The Clash of Civilizations"?

- A** Francis Fukuyama
- B** Samuel Huntington
- C** Plato
- D** Mahatama Gandhi

**Q17** : A 'theocracy' is a state that:

- A** is capitalist
- B** has an official state religion
- C** has a mixed economy
- D** does not recognize any religion

**Q18** : PTSD stands for

- A** Post Tsunami social distress
- B** Post Traumatic stress disorder
- C** Programme for training and skill development
- D** Programme for training in science technology and development

**Q19** : Taxes imposed on certain imported goods are known as:

- A** import tariffs
- B** central sales tax
- C** value added tax
- D** modified value added tax

**Q20** : The capital of Harshavardhana was:

- A** Gandhara
- B** Kanauj
- C** Gaya
- D** Pataliputra

**Q21** : The Gandhara school of art is in the tradition of:

- A** Indo-Sarasine Art
- B** Greco-Roman School
- C** Indo-Greek Art
- D** Indo-Chinese School

**Q22** : The fourth Buddhist council was held during the reign of:

- A** Kanishka
- B** Samudragupta
- C** Ashoka
- D** Bindusara

**Q23** : Jainism was founded by:

- A** Vardhaman Mahavir
- B** Rishabhanath
- C** Parsvanath
- D** Adinath

**Q24** : Who is associated with the permanent settlement of Bengal?

- A** Lord Cornwallis
- B** Lord Mountbatten
- C** Lord Macaulay
- D** Lord Dalhousie

**Q25** : The prohibition of Sati was formalised during the Governor-Generalship of:

- A** Lord Wellesley
- B** Lord Cornwallis
- C** Lord William Bentinck
- D** Lord Hardinge

**Q26** : In which year did India grant full statehood to Arunachal Pradesh?

- A** 1989
- B** 1987
- C** 1961
- D** 1963

**Q27** : The tribe of Shompen is found in:

- A** Andaman and Nicobar Islands
- B** Jharkhand
- C** Chhatisgarh
- D** Tamil Nadu



## Quantitative

**Q1** : If a certain amount doubles in three years, the compound interest rate is

- A** 22%
- B** 26%
- C** 30%
- D** 33%

**Q2** : The arithmetic mean of two numbers equals their geometric mean. If the sum of the number is 10, what are the numbers?

- A** 5 and 5
- B** 6 and 4
- C** 7 and 3
- D** 8 and 2

**Q3** : The product of the (LCM) least common multiple and the (GCD) greatest common divisor of two numbers is 54. If the sum of the two numbers is 15, then the numbers are:

- A** 5 and 10
- B** 4 and 11
- C** 7 and 8
- D** 6 and 9

**Q4** : If point  $(x,3)$  is equidistant from the points  $(1,2)$  and  $(2,1)$ , then what is the value of  $x$ ?

- A** 1
- B** 2
- C** 3
- D** 4

**Q5** : If  $c$  is subtracted from both the numerator and the denominator of the fraction  $\frac{28}{43}$ , the value of the fraction becomes  $\frac{1}{2}$ . What is the value of  $c$ ?

- A** 58
- B** 15
- C** 13
- D** 21

**Q6** : The metro service has a train going from Mumbai to Pune and Pune to Mumbai every hour. The first one starts at 6 AM from either side. The trip takes 4 hours and 30 minutes. If you start from Pune at 12 noon, how many trains would you cross? Assume that all trains move at the same speed.

- A** 7
- B** 8
- C** 9
- D** 10

**Q7** : Six brands of chocolates A, B, C, D, E and F are ranked in the order of preference by independent tasters. In how many distinct possible ways can brand A be ranked the best?

**A** 1

**B** 6

**C** 120

**D** 720

**Q8** : An old lady decided to bequeath the property among her three nephews. She gave Rs. 50,000 to her eldest nephew,  $\frac{5}{12}$  th of the whole property to her second nephew and the sum of what she gave her first and second nephews to her third nephew. How much did the third nephew get?

**A** 6,00,000

**B** 3,00,000

**C** 1,50,000

**D** 4,50,000

**Q9** : A container of 20 litres capacity is completely filled with milk and water in the ratio of 3:1. Spherical pebbles of volume 0.5 cc each are dropped into the vessel, as a result of which some mixture overflows. The pebbles are removed and water is added to replace the mixture overflowed. On analysis, the new mixture is found to contain only 60% milk. The number of pebbles dropped in the container is:

**A** 6000

**B** 9600

**C** 8000

**D** 6669

**Q10** : Which is the biggest of the following four numbers

tenth root of 8

cube root of 2

sixteenth root of 32

thirteenth root of 16

**A** tenth root of 8

**B** cube root of 2

**C** sixteenth root of 32

**D** thirteenth root of 16

**Q11** : 5 litres of water is mixed with 3 litres of milk. I remove 1 litre of the mixture and add 1 litre of milk. I remove 1 litre of the mixture again. The ratio of milk to water now in the mixture is

**A** 29:35

**B** 35:29

**C** 203:245

**D** 245:203

**Q12** : The next letter in the sequence OTTFFSSE is

**A** E

**B** N

**C** F

**D** G

**Q13** : The door numbers in my street are marked 1, 2, ... The sum of the door numbers up to left of my house is equal to twice the last door number in the street. The number of houses in the street is a multiple of 13. My door number is

**A** 11

**B** 12

**C** 13

**D** 14

**Q14** : Four persons P, Q, R and S have the same salary now. This year they had a 10%, 9%, 8% and 7% rise over their last year salary. Last year they had a 10%, 9%, 8%, 7% drop from the previous year salary. Who had the highest salary two years back

**A** P

**B** Q

**C** R

**D** S

Read the given extract and answer questions 15 to 16

Four friends Ali, John, Ram and Shyam are from Bengaluru, Chennai, Hyderabad and Mumbai (not necessarily in the same order). They are wearing blue, green, red and white shirts (not necessarily in the same order).

1. Ram is not wearing a green shirt
2. John and Ali are from Chennai and Mumbai (not necessarily in the same order)
3. Shyam is not from Hyderabad
4. The person from Chennai is wearing the red shirt.

**Q15** : If Shyam is not wearing green shirt, which if the following can be true

**A** Ram is from Bengaluru

**B** Shyam is wearing the white shirt

**C** Ali is wearing the blue shirt

**D** John is wearing the blue shirt

**Q16** : If the person from Mumbai is wearing a white shirt, Shyam is wearing

**A** White

**B** Red

**C** Blue

**D** Green

**Q17** : Ram ate three more cakes than Arun. Ben ate two more cakes than Ahmed and 3 less than Deepa. Shruti and Pavithra ate an equal number of cakes which is two less than what Deepa ate. Arun ate five more than Shruti. If Ahmed ate three cakes, the total number of cakes consumed is

**A** 49

**B** 51

**C** 53

**D** 55

**Q18** : If  $x - 1 = 1/(y-1)$  and  $x + 2y = 2xy - 3$  then  $y =$

**A** 1

**B**  $3/2$

**C** 2

**D**  $4/3$

**Read the given extract and answer questions 19 to 20**

Mr Patel wants to invite five families for lunch one on each of the next 5 days (Monday to Friday). He wants to invite T after he invites P and Q. R is not available on Monday and Wednesday. Mr Patel wants to invite S before he invites R.

**Q19** : If P is invited on Thursday

**A** only one solution is possible

**B** two solutions are possible

**C** three solutions are possible

**D** four solutions are possible

**Q20** : If T is invited on Wednesday

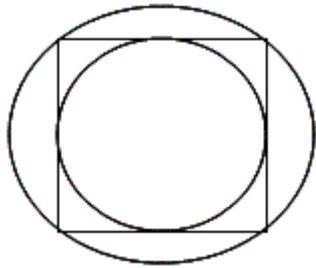
**A** only one solution is possible

**B** two solutions are possible

**C** three solutions are possible

**D** four solutions are possible

**Q21** : In the figure the ratio of the areas of the bigger circle to the smaller circle is



**A** 2:1

**B** 1.5:1

**C** 3.14:2

**D** 4:3.14

**Q22** : When 978 is divided by a certain divisor the remainder obtained is 9. When 326 is divided by the same divisor the remainder obtained is 3. When the sum of the two numbers are divided by the same divisor, the remainder obtained is 12. What is the value of the divisor?

**A** 17

**B** 3

**C** 13

**D** 19

**Q23** : People should be held accountable for their own behavior, and if holding people accountable for their own behavior entails capital punishment, then so be it. However, no person should be held accountable for behavior over which he or she had no control.

Which of the following is the most logical conclusion of the argument above?

**A** People should not be held accountable for the behavior of other people

**B** People have control over their own behavior

**C** People cannot control the behavior of other people

**D** People have control over behavior that is subject to capital punishment.

**Q24** : A, B and C play cricket. A's runs are to B's runs and B's runs are to C's runs as to 3:2. They get altogether 342 runs. How many runs did A make?

**A** 162

**B** 108

**C** 72

**D** 56

**Q25** : A piece of equipment costs a certain factory Rs. 6,00,000. If it depreciates in value, 15% the first year, 13.5% the next year, 12% the third year, and so on, what will be its value at the end of 10 years, all percentages applying to the original cost?

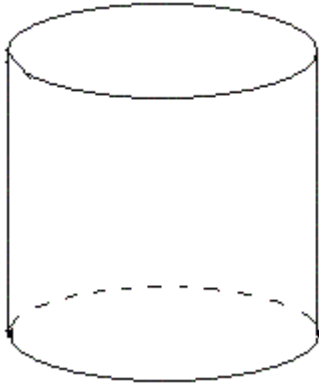
**A** Rs. 2,00,000

**B** Rs. 1,05,000

**C** Rs. 4,05,000

**D** Rs. 6,50,000

**Q26** : A right circular drum in which you store water is to be painted on the exterior. The drum is open on the top (it has no lid). The diameter and height of the drum are 2 ft and 5 ft respectively. If it takes 14 ml of paint to paint 1 sqft of the drum, how much paint would be required to paint the entire drum?



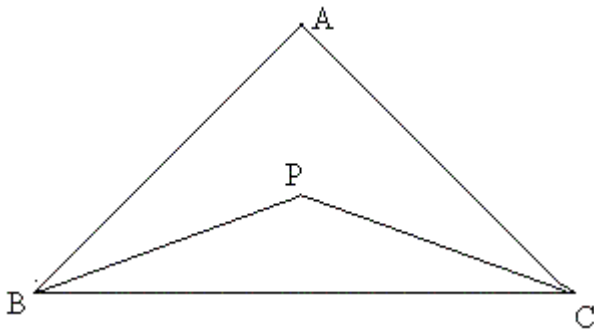
**A** 528 ml

**B** 436 ml

**C** 638 ml

**D** 484 ml

**Q27** : In the diagram BP and CP are angle bisectors. If the angle A =  $80^\circ$  What is the angle P?



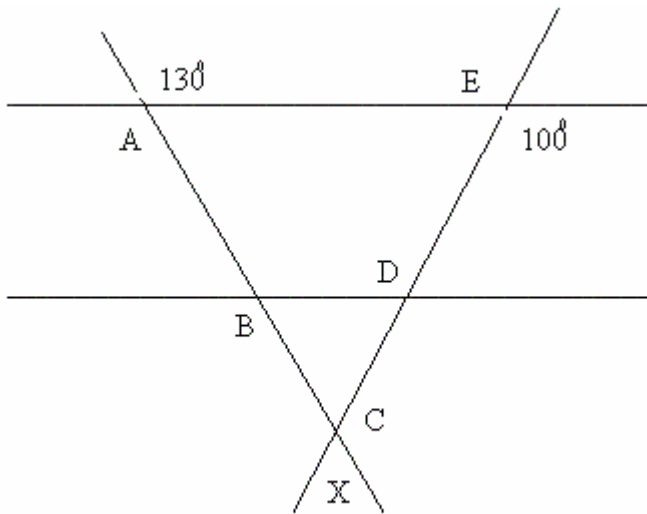
**A**  $80^\circ$

**B**  $160^\circ$

**C**  $130^\circ$

**D**  $110^\circ$

**Q28** : There are two lines parallel to each other. With additional information given in the diagram, find the angle X?



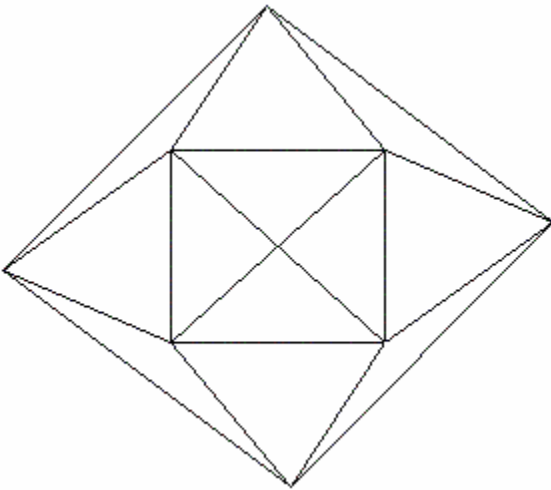
**A**  $50^\circ$

**B**  $100^\circ$

**C**  $130^\circ$

**D**  $70^\circ$

**Q29** : How many triangles are there in this diagram?



**A** 6

**B** 12

**C** 14

**D** 16

**Q30** : Raj has a stick of length 20 cm. He is able to break it into three pieces of integer lengths and is able to form a triangle with the lengths such that the end points of the pieces are the vertices of the triangle. How many ways can he break the stick to form triangles?

**A** 6

**B** 8

**C** 10

**D** 11

**Q31** : If  $a+b = 10$  and  $a^2 + b^2 = 148$  then  $a^3 + b^3 =$

**A** 1720

**B** 730

**C** 1000

**D** 520

**Q32** : If  $\tan x = 0.5$ ,  $\cot 2x =$

**A** 0.75

**B** 2

**C** 1.333

**D** 0.333

**Q33** : There are 5 distinct points on a paper. The maximum number of straight lines connecting two of them is

**A** 1

**B** 5

**C** 10

**D** 15

**Q34** : How many terms of a geometric progression  $ar^n$  where  $a = r = 3$  is required for the sum to be equal to 120?

**A** 2

**B** 3

**C** 4

**D** 5

**Q35** : A person spends  $\frac{1}{5}$  of his age in childhood,  $\frac{1}{6}$  in youth and  $\frac{1}{12}$  more as a bachelor. His daughter was born three years after his marriage and was half his age when he died. The age of the daughter when the father died is

**A** 30

**B** 36

**C** 24

**D** 45



**Q36** : John was 4 times old as his sister two years ago. He was 6 times old as his sister 2 years before that. In how many years from now will he be 2 times as old as his sister?

**A** 6

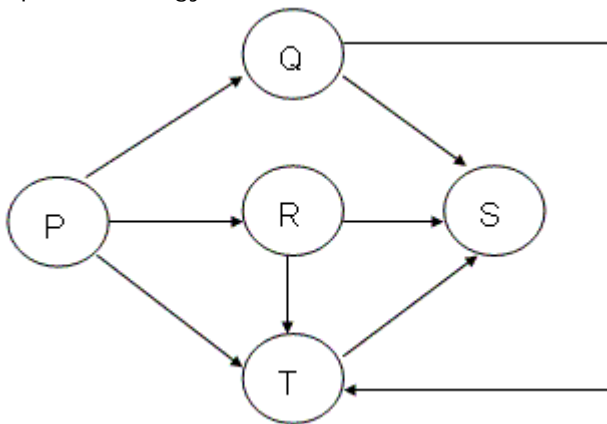
**B** 8

**C** 10

**D** 11

### Ecology

**Q1** : Examine this food web for a particular terrestrial ecosystem. Each letter is a species. The arrows represent energy flow.



Which species would end up having highest concentration of a toxic pollutant?

**A** T

**B** Q

**C** P

**D** R

**Q2** : Which of these are major sources of nitrate pollution in rivers?

**A** Animal waste and burning of fossil fuels

**B** Fertilizer runoff and burning of fossil fuel

**C** Animal waste and fertilizers

**D** Burning of fossil fuels

**Q3** : Which of the following is NOT a nitrogen-fixing bacterial species?

**A** Nitrosomonas

**B** Azotobacter

**C** Clostridium

**D** Rhizobium

**Q4** : Which of the following ecosystem accounts for the largest amount of the earth's net primary productivity?

- A** Oceans
- B** Tropical rain forests
- C** Savanna
- D** salt marsh

**Q5** : A cow's herbivorous diet indicates that it is

- A** an autotroph
- B** a primary consumer
- C** a decomposer
- D** a secondary consumer

**Q6** : The main decomposers in an eco system are

- A** plants and animals
- B** insects and prokaryotes
- C** fungi and and prokaryotes
- D** insects and fungi

**Q7** : Irreversibility refers to

- A** Natural extinction of various species
- B** Industrialization replacing agriculture
- C** Obtaining intellectual property rights for those developing and patenting new products
- D** Natural source that cannot be produced in the future if we fail to preserve them now

**Q8** : Deforestation leads to I - leads to localized flooding II - reduces sustainable logging potential III - reduces watershed stability IV - augments carbon restoration provided by forests

- A** I and II only
- B** I, II and III only
- C** III and IV only
- D** I, II, III and IV

**Q9** : Societies that throw away large quantities of paper, plastic, metal and other materials are called

- A** Recycling societies
- B** Toxic societies
- C** Disposable societies
- D** Post industrial societies

**Q10** : Which of the following locations in India is included in the category of 'biodiversity hot spots'?

- A** Thar desert
- B** Sunderbans
- C** Chilka Lake
- D** Western Ghats

**Q11** : Which of the following elements has the least concentration in the biotic system?

- A** Nitrogen
- B** Phosphorus
- C** Hydrogen
- D** Oxygen

**Q12** : In most countries around the world, lead has been removed from petrol because its presence:

- A** makes vehicles less efficient because of its weight
- B** camouflages the effect of air pollution
- C** produces toxic effects on humans by crossing the blood-brain barrier
- D** reduces 'knocking' in internal combustion engines

**Q13** : Match the correct set of energy sources from Group I with the respective conversion device in Group II

Group I: (a) Solar; (b) Wind; (c) Geothermal; (d) Biomass

Group II: (p) Turbine; (q) Gasifier; (r) Fuel Cell; (s) Photovoltaic cell; (t) Heat Pump

- A** a-s; b-p; c-t; d-q
- B** a-s; b-p; c-q; d-r
- C** a-t; b-p; c-q; d-r
- D** a-q; b-p; c-t; d-s

**Q14** : "One reason why uncertainty over climate looks to be with us for a long time is that the oceans which absorb carbon from the atmosphere, act as a time-delay mechanism." This time-delay mechanism of the ocean is called:

- A** ocean-inertia
- B** carbon-inertia
- C** thermal-inertia
- D** greenhouse-inertia

**Q15** : In many large Indian cities, the major components of air pollution include:

- A** hydrogen peroxide, carbon monoxide and small dust particles
- B** carbon monoxide, hydrocarbons and small dust particles
- C** hydrogen peroxide, carbon monoxide and carbon dioxide
- D** ammonia, carbon monoxide and sulphur dioxide

**Q16** : In the 1990s, which of the following companies introduced transgenic soy-bean variety called the "Roundup Ready"?

**A** Dupont

**B** Dow Chemicals

**C** Monsanto

**D** Union Carbide

**Q17** : Which state has the biggest wind farm cluster in India?

**A** Kerala

**B** Rajasthan

**C** Tamil Nadu

**D** Gujarat

**Q18** : Solar photovoltaic cells convert sunlight directly into electricity. The average efficiency with which this conversion takes place is approximately:

**A** 35 percent

**B** 42 percent

**C** 4 percent

**D** 12 percent

## **Essay Questions**

**Out 300 words on any ONE of the following topics:**

1. Sustainable development is incompatible with economic growth.
2. Are Gandhian principles of non-violence relevant today?
3. Economic development is a pre-requisite to realising human freedom.