राष्ट्रीय डिज़ाइन संस्थान
NATIONAL INSTITUTE OF DESIGN

B.Des./GDPD 2018
DAT Prelims
Test Paper
Part-1

PART-I

Questions 1 to 64 are multiple choice questions. The correct answer must be marked in the OMR answer sheet provided separately. Do not write your name anywhere in the booklet. This will lead to disqualification.

Directions (Question Nos. 1 to 24): Each question carries 0.5 marks. Please read the question carefully and select your response from the options provided.

Q1. Which one of the pairs given below is correctly matched?
(A) Harappan civilisation: Painted greyware
(B) The Mughals: Ajanta painting
(C) The Kushans: Gandhara school of art
(D) The Marathas: Pahari School of Painting

Q2. Among the options given, in which of the following languages are the sacred scriptures of Buddhism written in?
(A) Prakrit
(B) Pali
(C) Hebrew
(D) None of these

Q3. Kanyakumari, the tip of India is located towards which of the following?
(A) North of Tropic of Cancer
(B) South of the Equator
(C) South of the Capricorn
(D) North of the Equator

Q4. Who won for India a silver medal in the Rio Olympics and in which sport?
(A) Sakshi Malik (Wrestling)
(B) P V Sindhu (Badminton)
(C) Sania Mirza (Tennis)
(D) Sakshi Malik (Badminton)

Q5. The state of Emergency in India was of 21 months duration. When did this happen?
(A) 1975-1977
(B) 1973-1975
(C) 1977-1979
(D) None of these

Q6. Choose the correct set of colours from given choices for the given Indian traffic sign.
(A) Red, Black, Green
(B) Red, Blue, Green
(C) Red, Black, White
(D) Red, Black, Blue

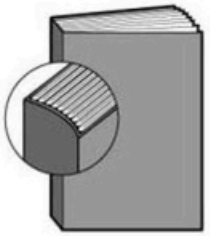


Q7. Match the following Materials with their respective Processes.

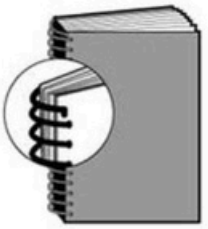
Materials	Processes
M1- Textile	P1- Blowing
M2- Stone	P2- Carving
M3- Metal	P3- Weaving
M4- Glass	P4- Casting

(A) M1- P3, M2- P2, M3- P4, M4- P1
(B) M1- P2, M2- P3, M3- P4, M4- P1
(C) M1- P3, M2- P1, M3- P4, M4- P2
(D) M1- P4, M2- P2, M3- P3, M4- P1

Q8. Choose the correct option from given choices for matching the right pairs.
1-Spiral Binding; 2-Perfect Binding; 3-Wire-o Binding



P



Q



R

(A) P - 2, Q - 1, R - 3
(B) P - 3, Q - 2, R - 1
(C) P - 1, Q - 2, R - 3
(D) P - 2, Q - 3, R - 1

Q9. Which artist painted the classic 'The Last Supper'?
(A) Leonardo da Vinci
(B) Michaelangelo
(C) Salvador Dali
(D) Pablo Picasso

Q10. Which of the following refers to 'The Study of Insects'?
(A) Anthropology (B) Insectology (C) Entomology (D) Etymology

Q11. The major part of agricultural land in India is under which kind of crop?
(A) Cash crops (B) Food crops (C) Oilseeds (D) Plantation crops

Q12. The period of European history that lasted from the 14th to the 17th century is known as what?
(A) Renaissance
(B) Industrial revolution
(C) Dadaism
(D) None of these

Q13. The closest descendant of Tyrannosaurus Rex that still lives today is



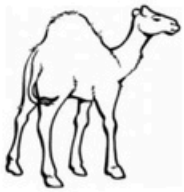
(A)



(B)



(C)



(D)

Q14. 'Demography' is the statistical study of _____.
(A) Human behavior (B) Human settlement (C) Human life (D) Human populations

Q15. Whose signature is seen on currency notes in India?
(A) Finance Minister
(B) Mahatma Gandhi
(C) Finance secretary of state
(D) Governor of RBI

Q16. Identify the organization which uses the given logo.
(A) National Skill Development Corporation
(B) Infrastructure Leasing & Financial Services
(C) Indian Institute of Entrepreneurship
(D) Indian Institute of Packaging



Q17. On which mechanism Paper Punching machine works?

(A) Gear mechanism
(B) Rack and Pinion mechanism
(C) Spring mechanism
(D) Four bar Mechanism

Q18. The essential condition for the formation of shadow is,

(A) there should be an opaque material.
(B) there should be a source of light and screen.
(C) the object must be placed in the path of light.
(D) All of the above

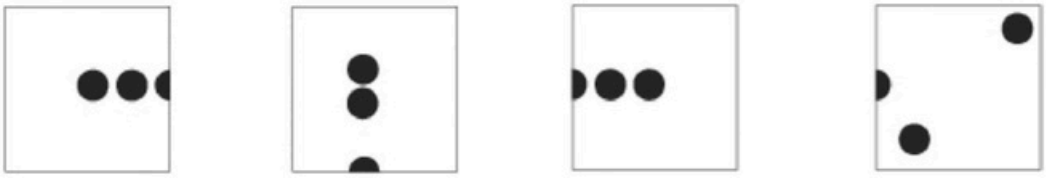
Q19. Which Indian River doesn't pass through any other neighboring country?

(A) Sutlej (B) Jhelum (C) Narmada (D) Brahmaputra

Q20. The 'Left' in politics refers to which of the following?

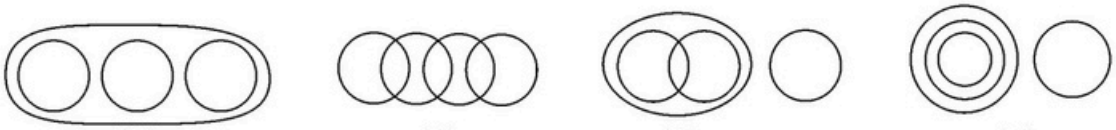
(A) Progressive, radical groups
(B) Conservative groups
(C) Those sitting on the left in Parliament
(D) None of these

Q21. Which of these images depicts clockwise movement?



(A) (B) (C) (D)

Q22. Identify the visual which represents the correct relationship between chappals (flipflops), sandals, shoes and footwear.



(A) (B) (C) (D)

Q23. What will be warmer to wear in winters - one thick sweater or layers of thin sweaters? (The combined thickness of the thin sweaters is the same as one thick sweater.)

(A) Both will be equally warm
(B) One thick sweater will be warmer
(C) Layers of thin sweaters will be warmer
(D) Can't be said for sure

Q24. 1. Gmail runs faster than Yahoo.
2. Hotmail runs faster than Gmail.
3. Yahoo runs faster than Hotmail.
If the first two statements are true, the third statement is _____.

(A) True (B) False (C) Uncertain (D) Can't Say

Directions (Question Nos. 25 to 47): Each question carries 1.0 marks. Please read the question carefully and select your response from the options provided.

Q25. You and your best friend are entering the stage for a dance performance from the same point, you both walk straight for 20 feet and turn left; then walk another 10 feet and turn left; again walk 10 feet, now you turn right and move 5 feet; while your friend turns left and moves 5 feet. Who is closer to the point from where you entered the stage?

(A) You (B) Your Best friend (C) Both (D) Neither

Q26. Fact 1: Rashmi said, *"Jyoti and I both have dogs."*
Fact 2: Jyoti said, *"I don't have a dog."*
Fact 3: Rashmi always tells the truth, but Jyoti sometimes lies.

Which of the following statements must also be a fact?
Statement I: Jyoti has a dog. Statement II: Rashmi has a dog. Statement III: Jyoti is lying.

(A) All the statements are facts. (B) Statement II Only
(C) Statement I & II Only (D) Statement I Only

Q27. Pointing to a man in a sketch, a woman said, *"His brother's father is the only son of my grandfather."* How is the woman related to the man in the sketch?

(A) Mother (B) Sister (C) Aunt (D) Daughter

Q28. In the given figure, how many triangles are there in total?

(A) 5
(B) 8
(C) 10
(D) 12



Q29. If it takes 5 machines 5 minutes each to make 5 *laddoos*, how long would it take 100 machines to make 100 *laddoos*?

(A) 5 (B) 20 (C) 100 (D) 25

Q30. Out of the 26 English alphabets, how many 'capital' alphabets can be made using straight lines only?

(A) 13 (B) 15 (C) 16 (D) 17

Q31. Select the correct image of the given figure, as it will appear reflected in water.





(A)



(B)



(C)



(D)

Directions (Question Nos. 32 to 35): Study the given images carefully to answer these questions.



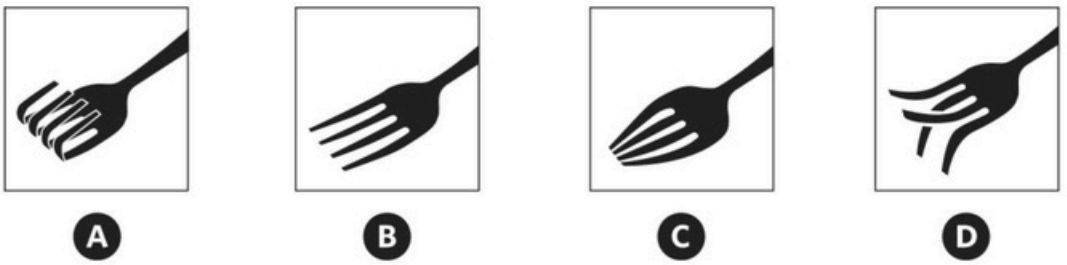
Q32. Which one of the above images best represents, "I want to live long"?

Q33. Which one of the above images best represents, "I don't want to carry extra baggage"?

Q34. Which one of the above images best represents, "I am comfortable with who I am"?

Q35. Which one of the above images best represents, "I want to be the best"?

Directions (Question Nos. 36 to 39): Study the given images carefully to answer these questions.



Q36. Which one of the above images best represents, "Sincere"?

Q37. Which one of the above images best represents, "Indifferent"?

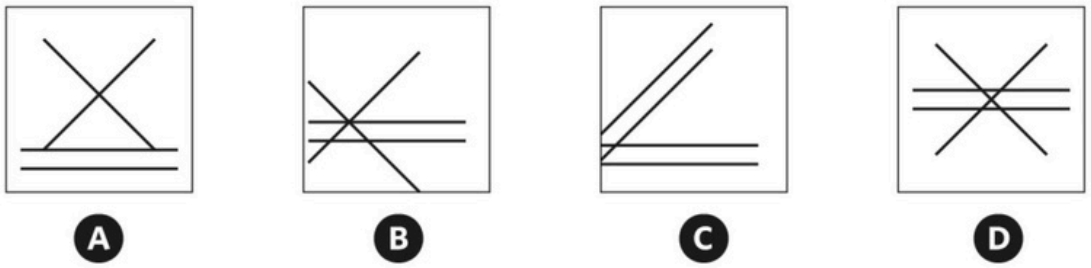
Q38. Which one of the above images best represents, "Dramatic"?

Q39. Which one of the above images best represents, "Selfish"?

Q40. Population of a village increases by 10% per year. Find the total population after 3 years if present population is 1000.
(A) 1300 (B) 1301 (C) 1331 (D) 1030

Q41. Mr "X" and Mr "Y" are good friends. Mr "X" borrows ₹2 lakhs (without any interest) from Mr "Y" and agrees to pay back 'Half' of the 'outstanding amount' every year. How many years Mr "X" takes to pay back the entire money ?
(A) Sixteen Years (B) Thirty Two Years (C) Sixty Four Years (D) None of these

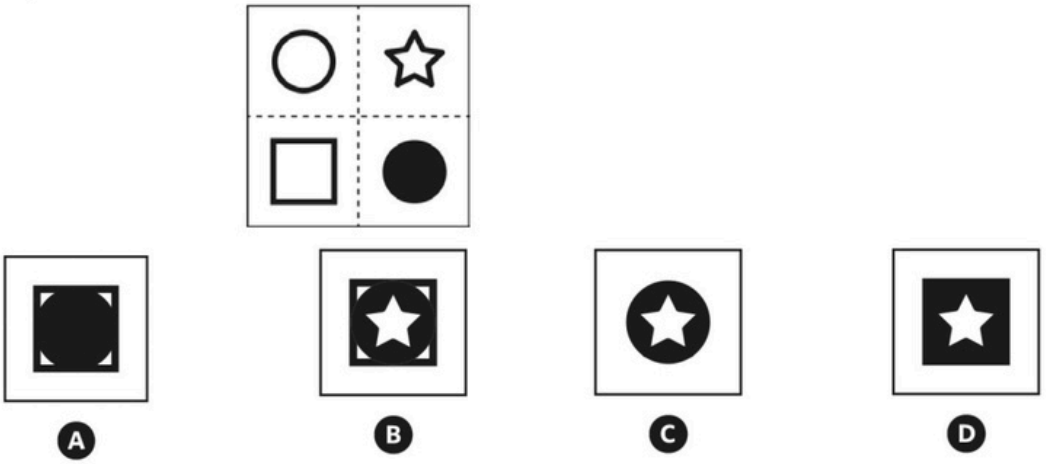
Directions (Question Nos. 42 to 43): Study the given images carefully to answer these questions.



Q42. Which one of the above images best represents, "stability"?

Q43. Which one of the above images best represents, "symmetry"?

Q44. The given sheet of transparent square paper with the patterns is folded twice. What will be the resultant pattern?



Q45. If the earth took 365 days to spin once about its own axis (as opposed to one day), then the consequence of this would be that,

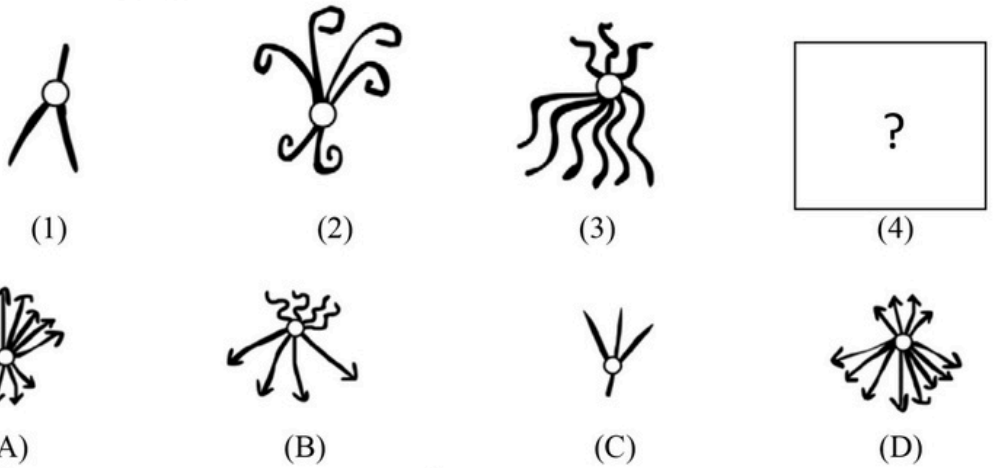
(A) there would be no seasons.

(B) one half of the earth would be in permanent darkness and the other in permanent daylight.

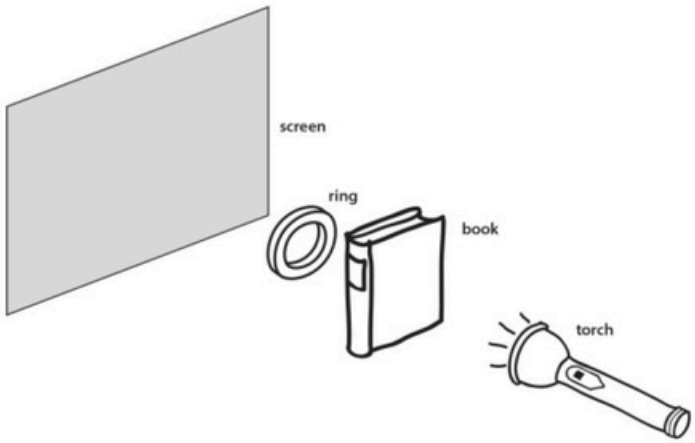
(C) days and nights would be of equal length at all places on earth at all times.

(D) the sun would be overhead everywhere on earth.

Q46. Identify the missing figure.



Q47. Based on the set-up given below, identify the correct shadow which will fall on the screen.





(A) (B) (C) (D)

Directions (Question Nos. 48 to 49): Each question carries 1.5 marks. Please read the question carefully and select your response from the options provided.

Q48. *The cleaning and restoration of Michaelangelo's frescoes on the ceiling of the Sistine Chapel were undertaken by some of the world's finest art restorers under the close supervision of an international team of art experts and historians. Nonetheless, the results have produced a storm of controversy. Most modern viewers, it seems, had become accustomed to seeing the frescoes with their colours dulled by layers of yellowing glue and varnish and with the contours of the figures obscured by centuries' accumulation of grime.*

The passage implies that Michaelangelo's frescoes
(A) have been the subject of intense controversy over their artistic merit.
(B) suffered until recently from centuries of obscurity and neglect.
(C) have been obscured by dirt during the recent process of restoration.
(D) were originally much brighter and more vivid than most modern viewers realize.

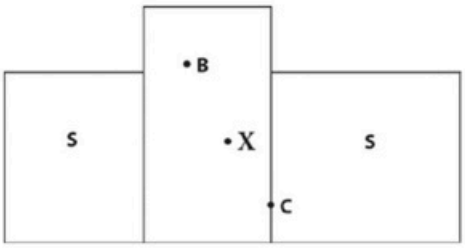
Q49. *"So when we see 'Red", what we are actually seeing is that portion of the electromagnetic spectrum with a wavelength of about 0.0007 millimeters, in a situation where the other wavelengths are absent. It is our brains (and our language) which inform us it is "red", and at the same time they often attach cultural labels that tell us it is powerful, or that it is the colour of love, or that it is a traffic sign which means we have to stop".*

Of all the inferences that we can make from this narration which is the most untrue?
(A) Electromagnetic waves of wavelength of about 0.0007 millimeters, come and hit our eyes when we are in front of a Traffic light with the red light glowing.
(B) When we see a painting with many colours - blue, green, red, yellow, etc. electromagnetic waves of many wavelengths are coming and hitting us.
(C) When we see the colour red, we call it 'red' as our language defines the portion of the electromagnetic spectrum with a wavelength of about 0.0007 millimeters as 'red'.
(D) The 'red' colour is so powerful because of the electromagnetic wave of wavelength of 0.0007 mm that the colour comes from.

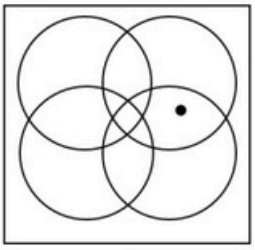
Directions (Question Nos. 50 to 62): Each question carries 2.0 marks. Please read the question carefully and select your response from the options provided.

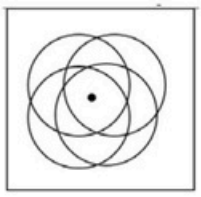
Q50. In the given figure, if 'S' represents Sea, 'B' represents Bhopal, 'C' represents Chennai, then what does 'X' represent?

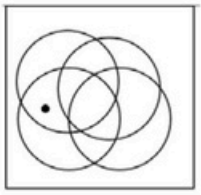
(A) Pune
(B) Bhubaneshwar
(C) Hyderabad
(D) Raipur

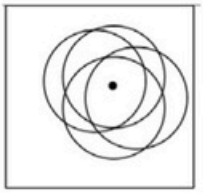


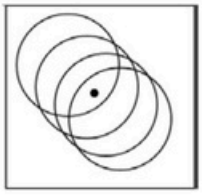
Q51. Which of the following options has the closest resemblance to the given image?




(A)


(B)

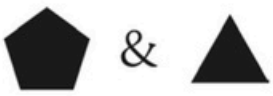

(C)


(D)

Q52. If the sun were a cube instead of a sphere, in what possible shapes could you see it in the sky?

(A) 

(B) 

(C) 

(D) 

Directions (Question Nos. 53 to 55): Read the paragraph carefully to answer these questions.

Culture gives meaning to our relationship with the other, as it also forms our subjective identity. Culture, therefore, enters into the processes of social change in many forms and at various levels. It defines the quality of social change as its indicator. Anthropologists define culture as the set of learned behaviours, beliefs, attitudes, values, and ideals that are quintessential to a particular society. The defining features of culture are that it is commonly shared; it is learned; it is mostly integrated (we mean that the elements or traits that make up that culture are just a random assortment of customs but are mostly consistent with one another); and culture is always changing. This definition includes such products of group life as folklore, mores, and other group expectations. In addition, there are the material elements that comprise so important a part of our contemporary culture and supplement the

psychological elements at every point. Finally, there are the meaningful relationships between the various parts of culture and the symbolic interpretations placed upon them. Customs, material objects, and meaningful relationships thus comprise the principal aspects of culture. Culture includes both structure and function. Because of its symbolic character,...culture is easily transmitted from one person to another. In this way, culture is a continuous and growing whole, acquiring new elements as it is handed down from one generation to the next, and spreading to new groups and peoples. The history of culture is, in a real sense, the history of humankind. For hundreds of thousands of years, culture in some form has been continuously transmitted. Some elements have been lost, others have been changed, new ones have been added. But culture itself has gone on.

Ideas are the real foundations of culture. All the machines in the world would be useless without the knowledge of how to use them. Human beings are, furthermore, a symbol-using animal, who make an understanding of these symbols fundamental to an understanding of culture. The meanings attached to the different aspects of culture are more important than the physical form these aspects may take. Material objects are clearly the product of humankind's cultural activity. No one would presume that the automobile for example sprang full blown from the brain of some supernatural power. The automobile is the product of a long line of human inventors, each of whom added something to the finished product. It must have started with the invention of the wheel.

Q53. Which of the following cannot be inferred from the passage?
(A) The transmission of material culture over time has led to several inventions across the world.
(B) The symbolic dimension of culture leads to its continual transmission over time.
(C) Culture plays a key role in how society changes over time.
(D) Culture and society are often at odds with each other.

Q54. Which of the following would be the best substitute for the term 'quintessential' in the passage?
(A) Quaint (B) Typical (C) Unmatched (D) Inadequate

Q55. The writer uses the phrase, 'ideas are the real foundations of a culture' in the passage to refer to the fact that
(A) without the intellectual stimulus, material objects are meaningless.
(B) ideas are based on culture.
(C) symbols are the result of humankind's material activity.
(D) culture is something solid and stable.

Q56. Pappu's mummy leaves home for office at 8:05 am and returns home at 11:15 pm. In this period how many times would Pappu see the minute and hour hands of their clock line up along a straight line?
(A) 30 (B) 15 (C) 14 (D) 28

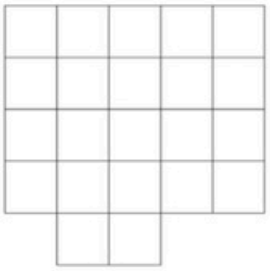
Q57. Which option indicates the correct sequence in which the following words appear in a Dictionary?
1) decease 2) decelerate 3) decentralize 4) deceased
5) deceive 6) december 7) deception
(A) 1, 2, 3, 4, 5, 6, 7 (B) 1, 3, 5, 2, 4, 6, 7
(C) 2, 4, 6, 1, 3, 5, 7 (D) 1, 4, 5, 2, 6, 3, 7

Q58. The shape below is formed from three smaller pieces. These pieces are connected by a tiny hinge at their point of attachment. Suppose, you were able to rotate the pieces so that neighboring sides aligned flatly and squarely, they will come together to form which of the following shapes?

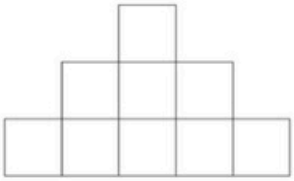
(A) Square
(B) Rectangle
(C) Triangle
(D) Trapezium



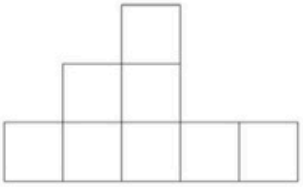
Q59. Aman was playing with his building blocks. He made a structure, three views of which are given. So, how many blocks did Aman use eventually?



Top View



Front view



Side view

(A) 28 (B) 26 (C) 27 (D) 29

Directions (Question Nos. 60 to 62): Read the paragraph carefully to answer these questions.

Colour is one of the most obvious visual feature of a gem. But in fact, it is just one of many properties, all of which are dependent upon light. The individual crystalline structure of a gemstone interacts with light in a unique way and determines the optical properties of each gem species. Effects produced by light passing through a gem and also produced by the reflection of light are discussed here. The colour of a gem depends largely on the way it absorbs light. White light is made up of the spectral colours of the rainbow, and when it strikes a gem some spectral colours are "preferentially absorbed". Those that are not absorbed, pass through or are reflected back, giving the gem its colour. Each gem, in fact has a unique colour "fingerprint", but this is only visible when viewed with a spectroscope. To the naked eye, many gems look the same colour.

Allochromatic or other-coloured gems are coloured by trace elements or other impurities that are not an essential part of their chemical composition. Corrundum, for example, is colourless when pure but impurities in it (like metal oxide) create the red stones we know as rubies, blue, green and yellow sapphires, and orange-pink padparadscha. Allochromatic gems are often susceptible to colour enhancement or change.

Q60. What is a gemstone's unique characteristic?

(A) Its transparency
(B) Its abruption spectrum
(C) Its reflection
(D) None

Q61. What cannot be called allochromatic?

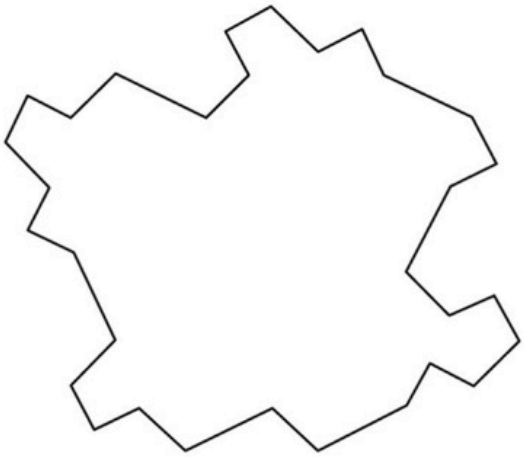
(A) Stone with metal oxide
(B) Orange-pink padparadscha
(C) Pure corundum
(D) None

Q62. What subject of study/science stream is being discussed here?

(A) Gemology (B) Colour therapy (C) Astrology (D) Spectrology

Directions (Question Nos. 63 to 64): Each question carries 3.0 marks. Please read the question carefully and select your response from the options provided.

Q63. Which of the following shapes can fill the given figure without any gaps?



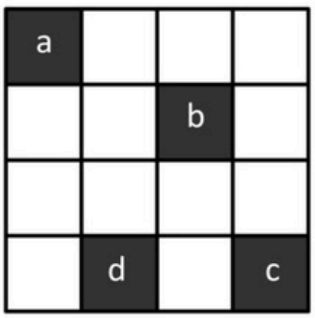


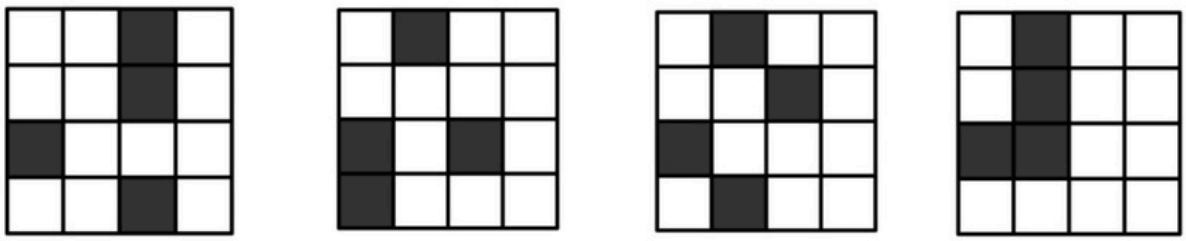
(A) (B) (C) (D)

Q64. Look at the given figure which has 16 squares. Now if –

(1) Square "a" moves two blocks right
(2) Square "b" moves one block left
(3) Square "c" moves one block up
(4) Square "d" moves one block right and
(5) The resultant figure is flipped about its vertical axis.

Which one of the following will be the final figure?





(A) (B) (C) (D)

B.Des./GDPD
DAT Prelims
Sample Test Paper
Part-II

PART-II

Directions: Please read the questions carefully and answer in the space provided.

Q65. Given here is the silhouette of a few objects in a specific position with respect to each other.



Imagine that the three objects are made of a) transparent glass, b) paper and c) wood respectively. In the given space below, draw the same arrangement of all the three objects without changing their relative position. Your drawing should be as large size as possible in the given space. Use shading to render material on the objects, such that the source of light is from the top right corner.

Q66. During a mishap due to short-circuit in the wiring of a multi story building, there was a fire on the ground floor near the staircase, which was spreading fast. A middle aged mother with her two children aged 4 and 7 were trapped in the balcony of the first floor. Neighbours of the society could find only a scooter, a 5 feet. tall ladder and some nylon rope of 12 feet. Depict the scenes showing how would the neighbours rescue the group and bring them down in the respective spaces provided. Do not use colour.

A) Rescuing the mother

B) Rescuing the children

Q67. "Ajay loved spending time gardening with his grandmother when he was a child. He remembers, once when he was 8 years old, by mistake he planted a seed of Corn along with a seed of Pea. Next morning when he went to the spot what he saw there was simply beyond his imagination. He still has the drawing of what grew on that spot. He felt amazed looking at the drawing of what he saw and wondered whether it was just his imagination or it actually happened."

Draw the drawing mentioned in the above paragraph.
Use pencil or pen to draw. Shading or coloring is not required.

Space for Rough Work

