60/2019

A

INSTRUCTIONS TO CANDIDATES

1. The question paper will be given in the form of a Question Booklet. There will be four versions of question booklets with question booklet alpha code viz.A,B,C & D.

2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the question booklet.

3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.

4. If you get a question booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.

5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your question booklet is unnumbered, please get it replaced by new question booklet with same alpha code.

6. The question booklet will be sealed at the middle of the right margin. Candidate should not open the question booklet, until the indication is given to start answering.

7. Immediately after the commencement of the examination, the candidate should check that the question booklet supplied to him contains all the 100 questions in serial order. The question booklet does not have unprinted or torn or missing pages and if so, he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.

8. A blank sheet of paper is attached to the question booklet. This may be used for rough work.

9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**

10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.

11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**

12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.

13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

A

001. CADD stands for _____

  (A)   Computer Aided Design and Drafting

  (B)   Computer Aided Drawing and Design

  (C)   Computer Aided Design and Demonstration

  (D)   None of these

002. The command that allows to draw lines at right angles only is

  (A)   Perpend   (B)   Right

  (C)   Set   (D)   Ortho

003. Which command is used to set drawing boundaries?

  (A)   Trim   (B)   Limit

  (C)   Exclude   (D)   Border

004. Which command is used to erase a part of an object between two points?

  (A)   Close   (B)   Finish

  (C)   Complete   (D)   Break

005. To erase a previously drawn line, which option in LINEcommand can be used?

  (A)   Erase   (B)   Undo

  (C)   Forget   (D)   Remove

006. The command used to join two non-parallel lines by drawing a beveled line

  (A)   Extend   (B)   Trim

  (C)   Chamfer   (D)   Rotate

007. Function key F10 is used in AutoCAD to _____

  (A)   Snap ON/OFF   (B)   Grid ON/OFF

  (C)   Ortho ON/OFF   (D)   Polar tracking

008. Which command is used to exit from a drawing file in AutoCAD?

  (A)   Exit   (B)   Quit

  (C)   Escape   (D)   None of these

009. Letters and Numerals are designated by their _____

(A) Width

(B) Height

(C) Style

(D) None of these

010. Standard size of A2 sheet (trimmed) is

(A) 841 × 1189

(B) 594 × 841

(C) 297 × 420

(D) 420 × 594

011. Which instrument is used to erase a particular spot of a line without erasing the nearby line?

(A) Eraser

(B) Trimmer

(C) Erasing shield

(D) Sand paper

012. It is a curved ruler used for drawing irregular curve

(A) Flexible curve

(B) Stencil

(C) French curve

(D) Compass

013. Single stroke lettering recommended by Bureau of Indian Standards for use in engineering drawings is

(A) IS 9608-83

(B) IS 9609-83

(C) IS 9600-86

(D) IS 9607-85

014. The dimensioning to be used only where the possible accumulation of tolerance does not endanger the functional requirements of the part

(A) Parallel dimensioning

(B) Chain dimensioning

(C) Super imposed running dimensioning

(D) None of these

015. When the section plane is inclined to the axis of the cone and cuts all the generators, the section obtained is

(A) Ellipse

(B) Parabola

(C) Hyperbola

(D) Helix

016. In first angle projection method the plane is placed

(A) Below X Y line　　　　　　　　　(B) Above X Y line

(C) Anywhere　　　　　　　　　　　(D) None of these

017. A Line is parallel to both the HP and VP. Its projection is

(A) Two parallel lines　　　　　　　(B) Line and a point

(C) Two points　　　　　　　　　　(D) Two inclined lines

018. Orthographic projection is also known as _____

(A) Oblique projection　　　　　　　(B) Perpendicular projection

(C) Cavalier projection　　　　　　　(D) Cabinet projection

019. The fundamental principle of surveying is to work from the _____

(A) Whole to the part　　　　　　　(B) Part to the whole

(C) Lower level to higher level　　　　(D) Higher level to lower level

020. The surveying used to determine additional details such as boundaries of field is called

(A) City survey　　　　　　　　　　(B) Location survey

(C) Cadastral survey　　　　　　　　(D) Topographical survey

021. The obstacle, which obstructs vision but not chaining, is a

(A) River　　　　　　　　　　　　(B) Pond

(C) Hill　　　　　　　　　　　　　(D) Both A & B

022. In a whole circle bearing system N $25°15'$E corresponds to

(A) $115°15'$　　　　　　　　　　(B) $154°45'$

(C) $25°15'$　　　　　　　　　　　(D) $334°45'$

023. The horizontal angle between the true meridian and magnetic meridian is known as

(A) True bearing　　　　　　　　　(B) dip

(C) Local attraction　　　　　　　　(D) Declination

024. The optical square used for setting out _____ angle

(A) 0°

(B) 45°

(C) 60°

(D) 90°

025. The theodolite is an instrument used for measuring very accurately

(A) Horizontal angle only

(B) Vertical angle only

(C) Horizontal and vertical angles

(D) Linear measurements

026. A line joining the optical center of the object glass and the center of the eyepiece is called

(A) Fundamental line

(B) Axis of telescope

(C) Axis of level tube

(D) Line of pollination

027. An axis about which the telescope can be rotated in a Horizontal plane is called _____

(A) Horizontal axis

(B) Vertical axis

(C) Axis of the telescope

(D) Line of pollination

028. The power of a telescope to form distinguishable image of objects separated by small angular distance is called its

(A) Definition

(B) Brightness

(C) Sensitivity

(D) Resolving power

029. The deflection angle may have any value between

(A) 0° & 45°

(B) 0° & 90°

(C) 0° & 120°

(D) 0° & 180°

030. The projection of a traverse line on a line parallel to the meridian is known as _____of the line

(A) Latitude

(B) Departure

(C) Bearing

(D) Angle

031. A staff reading taken on a Benchmark should be 2.627. Its reduced level is 150 m. What should be the height of instrument?

(A) 152.627 m
(B) 147.373 m
(C) 152.672 m
(D) 147.337 m

032. EDM stands for –––––

(A) Electronic distance measurement
(B) Electrical digital measurement
(C) Electronic digital measurement
(D) None of these

033. The most commonly used modern instrument in surveying is

(A) Digital theodolite
(B) Total station
(C) Air to level
(D) None of these

034. Sandstone is

(A) Sedimentary rock
(B) Metamorphic rock
(C) Igneous rock
(D) Volcanic rock

035. Well seasoned timber may contain moisture upto

(A) 4% to 6%
(B) 6% to 8%
(C) 8% to 10%
(D) 10% to 12%

036. Most commonly used solvent in oil paint is

(A) Petroleum
(B) Spirit
(C) Coal-tar
(D) Turpentine

037. The percentage of silica in good brick earth should vary from:

(A) 50 to 60%
(B) 40 to 50%
(C) 30 to 40%
(D) 20 to 30%

038. Soundness test of cement is carried out to determine:

(A) Ultimate strength
(B) Quantity of free lime
(C) Durability
(D) Initial setting

039. An example of four-centered arch is:

   (A)   Pointed Arch   (B)   Segmental Arch

   (C)   Venetian Arch   (D)   Florentine Arch

040. Rankin's formula is used to find out:

   (A)   Maximum depth of foundation   (B)   Minimum depth of foundation

   (C)   Minimum width of foundation   (D)   Volume of foundation

041. A temporary structure constructed to support workmen, materials etc. is

   (A)   Shoring   (B)   Underpinning

   (C)   Timbering   (D)   Scaffolding

042. Minimum headroom provided for a stair is

   (A)   2.10 m   (B)   2.70 m

   (C)   1.80 m   (D)   2.01 m

043. Vertical window provided on a sloping roof is

   (A)   Bay window   (B)   Dormer window

   (C)   Sky light   (D)   Clere-story window

044. Foundation which covers the entire area beneath a structure is

   (A)   Raff foundation   (B)   Pile foundation

   (C)   Well foundation   (D)   Pier foundation

045. For RCC construction the maximum size of course aggregates is limited to

   (A)   15mm   (B)   20mm

   (C)   30mm   (D)   10mm

046. The wooden queen post truss is suitable for span varying from

   (A)   5 to 9m   (B)   8 to 12m

   (C)   14 to 16m   (D)   14 to 20m

047. A full brick which is laid with its length perpendicular to the face of the wall is

(A) Facing
(B) Queen closer
(C) Header
(D) King closer

048. The part of the building constructed below ground level is

(A) Super structure
(B) Plinth
(C) Sub structure
(D) Cellar

049. Educational buildings belong to

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

050. Painting constant of panelled doors

(A) 1.00
(B) 0.80
(C) 1.30
(D) 1.80

051. For compacting the quantity of earthwork using prismoidal formula the number of required sectional area

(A) Any number
(B) Odd
(C) Four
(D) Even

052. The value at the end of the utility period without being dismantled

(A) Book value
(B) Scrap value
(C) Salvage value
(D) Market value

053. All the work executed shall be measured and entered in a permanent record called

(A) Account Book
(B) Field Book
(C) Personal Book
(D) M Book

054. While submitting tender the contractor is to deposit 2% of estimated cost as

(A) Securing Money
(B) Profit Money
(C) Capital Money
(D) Earnest Money

055. The estimated quantity of cement required in cement mortar (1:6) per cubic metre will be

(A) 5.5 Bags   (B) 4.8 Bags

(C) 8 Bags   (D) 3 Bags

056. In analysis of rate, contractor's profit is taken at the rate of

(A) 1%   (B) 10%

(C) 5%   (D) 20%

057. An intermediate floor between two floors above ground level accessible only from the lower floor is

(A) Loft   (B) Cabin

(C) Basement floor   (D) Mezzanine floor

058. As per National Building Code, the minimum area for a kitchen in residential building is

(A) $2.5 \, m^2$ (B) $3.30 \, m^2$

(C) $4.5 \, m^2$ (D) $7 \, m^2$

059. The total depth of water required by a crop during the entire period the crop is in the field is known as

(A) Delta   (B) Duty

(C) Base Period   (D) Crop Period

060. The optimum depth of kor watering is 19cm for

(A) Wheat   (B) Sugarcane

(C) Rice   (D) Cotton

061. When the bed level of canal is higher than the highest floor level (HFL) of the drainage, then the cross drainage work is said to be

(A) Aqueduct   (B) Super passage

(C) Canal siphon   (D) Siphon aqueduct

062. The most efficient channel cross section is

(A) Semi circular

(B) Half hexagonal in the form of trapezoid

(C) Rectangular

(D) Triangular

063. Gravity Dam can be constructed with

(A) Earth

(B) Masonry

(C) Sand

(D) Rocks

064. Free Board in a dam is

(A) A type of shutter

(B) Name of storage

(C) Margin between water level and top of dam

(D) None of these

065. For a liquid, the variation in its volume with the variation of pressure is known as

(A) Viscosity

(B) Mass density

(C) Compressibility

(D) Liquid pressure

066. The path followed by a fluid particle in motion is called

(A) Path line

(B) Stream line

(C) Steak line

(D) Filament line

067. Hydrostatic pressure in a dam depends on its

(A) Depth

(B) Shape

(C) Length

(D) Both A and B

068. The ratio of average load to the maximum demand of power during a given period is

(A) Load factor

(B) Capacity factor

(C) Utilization factor

(D) None of these

A

069. Argillaceous rocks-example

   (A) Slate   (B) Brick

   (C) Stone   (D) None of these

070. Super sulphated cement is IS:Code _____

   (A) 6220-1980   (B) 5820-2015

   (C) 6909-1990   (D) 6700-1980

071. The horizontal distance between the vertical joints in successive course

   (A) Lap   (B) Butt joint

   (C) Dowel joint   (D) Table joint

072. Spread footing for a wall is known as _____

   (A) Common footing   (B) Strip footing

   (C) Spread footing   (D) Combined footing

073. Single flying shore should have a depth of not less than _____ of the clear spans and width of not less than _____ of its length

   (A) 1/8, 1/9   (B) 3/9, 3/8

   (C) 1/3, 1/5   (D) 1/2, 1/10

074. Area of the horizontal circulation may constitute about _____ of the total plan area of a residential building.

   (A) 5% to 10%   (B) 7% to 8%

   (C) 2% to 20%   (D) 20% to 25%

075. Life period of a building should be at least _____ years

   (A) 50   (B) 60

   (C) 75   (D) 100

076. Barbed wire fencing units of measurement in MKS

   (A) Metre   (B) cu.m

   (C) Quintal   (D) Kg

077. It is that part in excess of hygroscopic water which exists in the pore space of the soil by molecular attraction

(A) Sea water
(B) River water
(C) Capillary water
(D) None of these

078. The hydraulic structure in which the drainage is taken over the irrigation canal is known as

(A) Super passage
(B) Level cross
(C) Super elevation
(D) All of the above

079. The sheet of liquid flowing over notch is known as

(A) Nappe or vein
(B) Flow
(C) Gate
(D) Valve

080. When the expenditure on a work exceeds or is likely to exceed the amount of administrative sanction by more than 10%,

(A) Plinth area estimate
(B) Detailed estimate
(C) Revised estimate
(D) None of these

081. Wooden plank on which roof covering is fixed

(A) Purline
(B) Hip
(C) Rafter
(D) Battens

082. The joint formed by cutting the edge of both the members by an angle is

(A) Plain joint
(B) Butt joint
(C) Tenon joint
(D) Angle joint

083. Solid geometrical drawing dimensions

(A) Two
(B) Three
(C) One
(D) Four

084. Composition of brick earth alumina or clay

(A) 20-30% (B) 35-50%

(C) 20-25% (D) 1-2%

085. D.P.C. is provided above _____ level

(A) Foundation (B) Basement

(C) Plinth (D) Base level

086. Undersurface of arch_____

(A) Sofitt (B) Intrados

(C) Extrados (D) Crown

087. Mercantile (includes both retail and wholesale stores) _____ group

(A) Group-C (B) Group-H

(C) Group-F (D) Group-G

088. The angle of inclination of stair with the floor

(A) Pitch (B) Rise

(C) Tread (D) All of the above

089. If the velocity of a body decreases with time, it is called

(A) Acceleration (B) Motion

(C) Inertia (D) Retardation

090. 1 HP in metric is _____ Watts.

(A) 736 (B) 746

(C) 560 (D) 78

091. Kinetic energy is measured in

(A) Dynes (B) Newtons

(C) Watts (D) Joules

092. The ratio of lateral strain to linear strain

(A) Strain ratio (B) Bulk modulus

(C) Working stress (D) Poisson ratio

093. A pump can raise 100 litres of water through a height of 200 metre in one minute. How much work it can do in one hour?

(A) 2000

(B) 14×10^3

(C) 12×10^5

(D) 20

094. The friction experienced by a body when it is in motion

(A) Static friction

(B) Coefficient friction

(C) Limiting friction

(D) Dynamic friction

095. S.I. prefix of 10^{-6} is

(A) Micro

(B) Mega

(C) Milli

(D) Nano

096. 1 inch = _____ Centimetre.

(A) 0.3937

(B) 30.48

(C) 2.54

(D) 25.40

097. Unit of Power in S.I. System

(A) Joule

(B) Watt

(C) Newton

(D) Volt

098. Calculate the side of the square which will have the same area as the rectangle 50 mm by 25 mm side.

(A) 42.36

(B) 38.57

(C) 32.10

(D) 35.36

099. A rectangular sheet metal measures 12 cm by 8 cm. Four quadrants of circle of radius 2 cm each are cut away at the corners. Find the area of the remaining portion.

(A) 52.34

(B) 83.44

(C) 64.45

(D) 8.53

100. Find the area of a right angular triangle whose base is 15 cm and hypothesis is 21 cm.

(A) 110.18

(B) 119.65

(C) 128.40

(D) 168.70

_____

SPACE FOR ROUGH WORK