

लोक सेवा आयोग
स्थानीय तह अन्तर्गत प्राविधिकतर्फ इञ्जिनियरिङ्ग सेवा, सिभिल समूह अन्तर्गत, ७ठी तह,
इञ्जिनियर पदको प्रतियोगितात्मक संयुक्त लिखित परीक्षा

ey (A)

समय :- १ घण्टा १५ मिनेट

पत्र: प्रथम
विषय:- सिभिल इञ्जिनियरिङ्ग

पूर्णाङ्क :- १००

सुनात बहुउत्तर (१००×१ अङ्क...):-

उत्तरपुस्तिकाया प्रश्नपत्रको Key अनिवार्य रूपले उल्लेख गर्नुपर्नेछ । उल्लेख नभएमा उत्तरपुस्तिका रद्द हुनेछ ।
साथै परीक्षामा Calculator, Mobile वा यस्तै प्रकारका विद्युतीय उपकरण प्रयोग गर्न पाइने छैन ।

Another aim of e-procurement is Increased choice of supplier leading to sourcing item:

- (A) of the right quality
(C) from the right source

- (B) deliver at the right time
(D) at the right price

The age for member of state assembly be

- (A) completed the age of 25 years
(C) no age bar

- (B) completed the age of 20 years
(D) None of the above

The action or behavior of an individual in a particular society is concerned with right and wrong
good or bad is

- (A) skill
(B) profession

- (C) ethics
(D) service

Pre-Qualification should be done while the amount of procurement or construction work is to be
carried out

- (A) more then 6 million (B) more than 5 million (C) less than 6 million (D) less than 5 million
The type of contract when payment shall be made for actual work done at site is
(A) unit rate contract (B) material contract (C) petty contract (D) All of the above

According to Labour Act, maximum working hour for a labour per week should be

- (A) 44 hours (B) 49 hours (C) 48 hours (D) 52 hours
The total number of members in Nepal Engineering Council is
(A) 18 (B) 15 (C) 12 (D) 9

Pickup the correct statement from the following

- (A) the change in the amount of money over a given time period is called 'time value' of money
(B) the manifestation of the time value of money is termed as interest
(C) interest on borrowing = present amount owed-original loan
(D) All of the above

The change in any parameters of project due to change in any factor is called

- (A) sensitivity (B) resistivity (C) variation (D) captivity
Inflation is normal phenomenon in which
(A) nominal price of object is raised
(B) nominal price of object is decreased
(C) nominal price of object is constant
(D) None of the above

The benefit cost ratio is

- (A) directly proportional to discount rate
(B) inversely proportional to discount rate
(C) no any relation with discount rate
(D) All of the above

Discounting is the process of

- (A) determining the future value of cash flow
(B) finding the present value of cash flow
(C) finding equal periodic payments
(D) reducing equal periodic payments

13. Break even analysis is the limited form of (C) benefit analysis (D) interest analysis
(A) sensitivity analysis (B) cost analysis
14. Surveys which are carried out to provide a national grid of control for preparation of accurate maps of large area, are known (B) geodetic surveys
(A) plane surveys (D) topographical survey
(C) geographical surveys
15. The most commonly used set of theodolite operations are (B) right face and left swing
(A) right face and right swing (D) left face and right swing
(C) left face and left swing
16. The technique of plotting all the accessible stations with a single set up of plane table is called (D) traversing
(A) radiation (B) intersection
(C) resection
17. An example for a level surface is (B) surface of the sea
(A) surface of the earth (D) surface of a reservoir
(C) surface of the still lake
18. At the equator the amount of dip is (C) 60°
(A) 0° (B) 45° (D) 90°
19. Reciprocal levelling eliminates (A) collimation error
(A) collimation error (B) collimation, curvature and refraction error
(B) collimation, curvature and refraction error (C) curvature and refraction error
(C) curvature and refraction error (D) collimation and curvature error fully and refraction error partly
(D) collimation and curvature error fully and refraction error partly
20. A chain may get elongated due to (D) kinks in links
(A) change in temperature (B) difference in pull (C) openings of rings
21. Determining the difference in elevation between two points on the surface of the earth is known as (A) abney levelling (B) simple levelling (C) differential levelling (D) longitudinal levelling
(A) abney levelling (B) simple levelling (C) differential levelling (D) longitudinal levelling
22. One plane projection is (A) oblique projection (B) axonometric projection (C) both (A) and (B) (D) None of the above
(A) oblique projection (B) axonometric projection (C) both (A) and (B) (D) None of the above
23. In the case of orthographic projection the number of view used are (C) 6
(A) 5 (B) 7 (D) 3
24. A circle is in isometric projection appears as (C) circle (D) plane
(A) line (B) ellipse (C) circle (D) plane
25. An engineer's staff would be used to measure lines on a drawing where the scale factor reads (B) $\frac{3}{4}'' = 1'-0''$
(A) $\frac{3}{4}'' = 1''$ (C) $1'' = 100'$ (D) $\frac{3}{4}'' = 1'-0''$
26. Circle and arcs are drawn by means of a (C) T-square (D) compass
(A) lengthening bar (B) divider (C) T-square (D) compass
27. In first angle projection the right side view must be drawn on (C) top (D) None of the above
(A) right side (B) left side (C) top (D) None of the above
28. A circle in isometric projection appears as (C) ellipse (D) a point
(A) circle (B) parabola (C) ellipse (D) a point
29. In case of orthographic projection, the number of view generally used are (C) 4 (D) 8
(A) 2 (B) 6 (C) 4 (D) 8
30. Axonometric projection is (C) isometric (D) multi view
(A) orthographic (B) perspective (C) isometric (D) multi view

31. Isometric projection, all distances are approximately this percentage of their size
 (A) 120 percent (B) 80 percent (C) 50 percent (D) 20 percent
32. The paper size of A4 is (in mm)
 (A) 297×420 (B) 210×297 (C) 215×290 (D) 420×850
33. In isometric projection the receding lines are drawn with horizontal at
 (A) 45° (B) 30° (C) 60° (D) 90°
34. Specification for the holdfasts are given in terms of
 (A) number (B) weight (C) volume (D) length
35. In the case of roof truss made of steel, rivets, bolts and nuts usually account for
 (A) 1% (B) 5% (C) 10% (D) 15%
36. The unit of measurement is per quintal for the following
 (A) collapsible gates with rails (B) rolling shutters
 (C) expanded metal wire netting (D) M.S. reinforcement of R.C.C. work
37. For 100 sq.m. cement concrete (1.2:4) 4 cm thick floor, the quantity of cement required, is
 (A) 0.90 m³ (B) 0.94 m³ (C) 0.98 m³ (D) 1.00 m³
38. Working out the exact quantities of various item of work is known as
 (A) estimating (B) mensuration (C) quantity surveying (D) valuation
39. The gradual reduction in value with age of a property is known as
 (A) devaluation (B) revaluation (C) depreciation (D) appreciation
40. Centre line method of estimation is mostly used for
 (A) culverts works (B) building works (C) bridge works (D) All of the above
41. The weight of an item is measured correct to nearest
 (A) 0.25 kg (B) 0.50 kg (C) 0.75 kg (D) 1.00 kg
42. The earliest method used for planning of projects was
 (A) PERT (B) CPM (C) Bar chart (D) Milestone chart
43. The amount required to be deposited by a contractor while submitting a tender is known as
 (A) fixed deposit (B) caution deposit (C) security deposit (D) earnest money deposit
44. Resource smoothening means
 (A) gradual increase in resources (B) adjustment of resources to the least variations
 (C) complete revamping of resources to suit the requirement (D) optimization and economical utilization of resources
45. If a is the optimistic time, b is the pessimistic time and m is the most likely time, then the average time is calculated as
 (A) $\frac{a+b+m}{3}$ (B) $\frac{a+b+m}{6}$ (C) $\frac{a+4m+2b}{6}$ (D) $\frac{a+4m+b}{6}$
46. The critical activity has
 (A) maximum float (B) minimum float (C) zero float (D) None of the above
47. The density of cement is generally taken as
 (A) 1500 kg/m³ (B) 1750 kg/m³ (C) 1250 kg/m³ (D) 2000 kg/m³
48. The unit weight of R.C.C. in kg/m³ is—
 (A) 1200 (B) 1800 (C) 2400 (D) 3000
49. A contractor can start the construction works with following the receipt of
 (A) award of contract (B) contract agreement (C) notice to proceed (D) variation order

50. Any variation to a contract should be
(A) fully considered (including the impact and risk) (B) appropriately documented
(C) be formally approved (D) All of the above
51. Site order book is used for recording
(A) instructions by the executive engineers (B) construction measurement
(C) issue of store equipment (D) names of the casual labour
52. The document announcing to prospective bidders that the owner is ready to receive bids is called
(A) notice to bidders (B) instruction to bidders (C) bill of quantities (D) intension to acceptance
53. The purpose of bid evaluation is to determine
(A) lowest (B) responsive bid
(C) substantially responsive bid (D) lowest evaluated substantially responsive bid
54. A Gantt chart indicates
(A) balance of work to be done (B) efficiency of project work
(C) comparison of actual process with the scheduled progress (D) progress cost of project
55. CPM requires
(A) single time estimate (B) double time estimate
(C) triple time estimate (D) None of the above
56. Compaction test for concrete is done to determine
(A) consistency of concrete (B) workability of concrete
(C) compressive strength of concrete (D) tensile strength of concrete
57. An aggregate which passes through 25 mm I.S. sieve and is retained on 20mm sieve, is said to be flaky if its least dimension is less than
(A) 22.5 mm (B) 18.5 mm
(C) 16.5 mm (D) 13.5 mm
58. The quality of cement is tested by
(A) compressive strength (B) tensile strength (C) bond strength (D) None of the above
59. The basic water depend on
(A) the quality of materials (B) water/cement ratio
(C) ratio of cement to sand (D) both (A) and (B)
60. The sieve number used in the fineness modulus test of cement is
(A) 1 (B) 5 (C) 7 (D) 9
61. The ultimate load of a balanced reinforced concrete beam is proportional to
(A) crushing strength of concrete (B) tensile strength of concrete
(C) tensile strength of concrete (D) crushing strength of steel
62. For constant w/c ratio if the aggregate/cement ratio is reduced, the workability of concrete
(A) increases (B) decreases (C) is not affected (D) may increase or decrease
63. The grade of concrete M₁₅ means that compressive strength of 15cm cube after 28 days is
(A) 100 kg/cm² (B) 150 kg/cm² (C) 200 kg/cm² (D) 250 kg/cm²
64. Sand requiring a high water cement ratio belongs to
(A) zone I (B) zone II (C) zone III (D) zone IV
65. After casting, an ordinary cement concrete on drying
(A) expands (B) swell (C) shrinks (D) None of the above
66. Slump test of concrete is a measure of its
(A) consistency (B) compressive strength (C) tensile strength (D) impact value

67. The cement concrete in which high compressive stressed are artificially induced before its actual use is called
 (A) plain cement concrete
 (B) reinforced cement concrete
 (C) prestressed cement concrete
 (D) lime concrete
68. The minimum compressive strength of first class bricks should be
 (A) 5 N/mm²
 (B) 7.5 N/mm²
 (C) 9 N/mm²
 (D) 10 N/mm²
69. The test conducted in the laboratory on the specimen made out of trial concrete mix is called
 (A) preliminary test
 (B) slump test
 (C) works test
 (D) None of the above
70. Asphalt is a mixture of
 (A) bitumen and inert mineral matter
 (B) bitumen and cement
 (C) tar and asbestos
 (D) bitumen and asbestos
71. Age of a tree may be ascertained by
 (A) radius of its stem
 (B) circumference of its stem
 (C) number of branches
 (D) number of annual rings
72. The required number of bricks (size 9"×4.5"×2.25") for 1 cubic meter of cement masonry work is
 (A) 1000
 (B) 875
 (C) 560
 (D) 250
73. DPC is generally applied at
 (A) roof level
 (B) plinth level
 (C) lintel level
 (D) sill level
74. Soil is considered as
 (A) single phase system
 (B) two phase system
 (C) three phase system
 (D) None of the above
75. The workability of concrete mix depend upon:
 (A) proportion of concrete
 (B) amount of reinforcement
 (C) size and shape of formwork
 (D) All of the above
76. The final setting time of ordinary Portland cement should not be more than
 (A) 5 hours
 (B) 7.5 hours
 (C) 10 hours
 (D) 12.5 hours
77. The presence of sand in brick earth prevents
 (A) cracking of bricks
 (B) shrinkage of bricks
 (C) warping of bricks
 (D) None of the above
78. Most of the stones possess the specific gravity in the range of
 (A) 1 to 1.5
 (B) 1.5 to 2
 (C) 2.4 to 2.9
 (D) 3 to 4
79. Distemper paint means
 (A) water paint
 (B) oil paint
 (C) cement paint
 (D) enamel paint
80. A small quantity of magnesia in brick earth imparts:
 (A) red tint to bricks
 (B) yellow tint to bricks
 (C) black tint to bricks
 (D) None of the above
81. The Smith's test of stones is performed to find out:
 (A) the presence of soluble material
 (B) the tensile strength
 (C) the presence of lime
 (D) None of the above
82. Choose the correct statement
 (A) confined aquifer is at upper level and unconfined aquifer at lower level under the ground
 (B) confined is temporary and unconfined is permanent under the ground
 (C) confined is unsaturated and unconfined is saturated under the ground
 (D) confined aquifer is at lower level and unconfined aquifer is at upper level under the ground
83. If W is the uniformly distributed load on a circular slab of radius R fixed at its ends, the maximum positive radial moment at its centre is
 (A) $\frac{3WR^2}{16}$
 (B) $\frac{2WR^2}{16}$
 (C) $\frac{WR^2}{16}$
 (D) zero

84. The most economical design of singly reinforced beam is given by
 (A) limit state theory (B) working stress theory (C) ultimate stress theory (D) All of the above
85. Lap splices in tension reinforcement are permitted for bars
 (A) larger than 36 mm (B) less than 36 mm (C) less than 25 mm (D) all diameter bars
86. The minimum number of longitudinal steel bars in RCC circular columns must be
 (A) 2 (B) 4 (C) 6 (D) 8
87. The tensile test is carried on materials.
 (A) ductile (B) brittle (C) malleable (D) plastic
88. In prestressed concrete structures the prestressing of concrete is done to compensate the stressed caused by
 (A) dead loads (B) working loads (C) live loads (D) dynamic loads
89. Plain cement concrete is strong enough in following case
 (A) to bear compression load (B) to bear tension load (C) to bear shearing load (D) to bear torsion load
90. The seven days compressive strength of a good Portland cement, as obtained from the compressive test of cement sand mortar should not be less than
 (A) 125 kg/cm² (B) 150 kg/cm² (C) 175 kg/cm² (D) 200 kg/cm²
91. The shape of the bending moment over the length of a beam carrying a uniformly distributed load is always
 (A) linear (B) parabolic (C) cubical (D) circular
92. Choose the correct statement
 (A) strain is the response of a system to an applied stress
 (B) stress is the response of a system to an applied strain
 (C) stress is stronger than strain
 (D) stress and strain both are same
93. In a general co-planar force system, the number of unknown forces that can be found by the principle
 (A) 1 (B) 2 (C) 3 (D) 4
94. A beam is a
 (A) one dimensional structure (B) two dimensional structure
 (C) three dimensional structure (D) None of the above
95. In R.C.C. structure, the most appropriate overlapping length for reinforcement bar is
 (A) 1.5 metre (B) 3 metre
 (C) 50-60 times diameter of reinforcement bar (D) 2-4 times diameter of reinforcement bar
96. The bending moment in a beam will be maximum where
 (A) the shear force is uniform (B) the shear force is maximum
 (C) the shear force is minimum (D) the shear force is zero
97. The percentage elongation of a material from a direct tensile test indicates
 (A) ductility (B) strength (C) yield stress (D) ultimate strength
98. The percentage reduction in area of number from a direct tension test indicates
 (A) ductility (B) elasticity (C) malleability (D) brittleness
99. National building code Nepal 2060 is prepared in
 (A) 15 volumes (B) 23 volumes (C) 35 volumes (D) 50 volumes
100. Nepal engineering council is an autonomous body formed under act in
 (A) 2054 (B) 2060 (C) 2055 (D) 2065