

KATHMANDU UNIVERSITY  
End Semester Examination [C]  
June 2018

Marks scored:

Level : B.E. / B.Tech.

Course : CIEG 201

Year : II

Semester: I

Exam Roll No.:

Time: 30 mins.

F.M. : 10

Registration No.:

Date

JUN 15 2018

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Tick (✓) the most appropriate answer

- The minimum compression strength of first and second class bricks should be  
[a]  $75 \text{ kg/cm}^2$  &  $100 \text{ kg/cm}^2$  [b]  $100 \text{ kg/cm}^2$  &  $90 \text{ kg/cm}^2$   
[c]  $100 \text{ kg/cm}^2$  &  $75 \text{ kg/cm}^2$  [d]  $120 \text{ kg/cm}^2$  &  $100 \text{ kg/cm}^2$
- The portion of the brick without a triangular corner equal to half the width and half the length is called  
[a] Closer [b] Queen closer [c] King closer [d] Squint brick
- The rapid hardening Portland cement is obtained by  
[a] Grinding the clinker to a high degree of fineness  
[b] Adding calcium sulphate to the mixture  
[c] Adding gypsum after grinding  
[d] Burning the mixture at a lower temperature
- Ultimate strength to cement is provided by  
[a] Tri-calcium silicate [b] Di-calcium silicate  
[c] Tri-calcium aluminate [d] Tetra calcium alumino ferrite
- Tick the correct statement from the followings  
[a] Bulking of sand is less when its particles are fine  
[b] The first compound of cement which react with water is  $c_2s$   
[c] Gypsum in cement decrease the setting time  
[d] The percentage of  $c_3s$  is less than  $c_2s$  in cement
- An aggregate is said to be flaky if its least dimension is less than  
[a]  $3/5^{\text{th}}$  of mean dimension [b]  $1/5^{\text{th}}$  of mean dimension  
[c]  $2/5^{\text{th}}$  of mean dimension [d]  $4/5^{\text{th}}$  of mean dimension
- For the manufacture of Portland cement, the proportions of raw materials used, are  
[a] Lime 63%; silica 22%, other ingredients 15%  
[b] Silica 63%; lime 22%; other ingredients 15%  
[c] Silica 40%; lime 40%; other ingredients 20%  
[d] Silica 70%; lime 20%; other ingredients 10%
- The percentage of water required for normal consistency for OPC cement is  
[a] 5% to 15% [b] 10% to 25%  
[c] 26% to 33% [d] 40% to 50 %
- The insoluble residue in cement is less than  
[a] 15% [b] 10% [c] 1.5% [d] 1%

10. Minimum required water cement ratio for a workable concrete is  
[a] 0.30 [b] 0.50 [c] 0.40 [d] 0.60
11. Bituminous felts are used for  
[a] Covering A.C. sheets [b] D.P.C  
[c] Covering sloping roofs [d] Covering floor
12. The physical classification divides the rocks into  
[a] Calcareous, argillaceous and siliceous  
[b] Organic, semi-organic and inorganic  
[c] Igneous, sedimentary and metamorphic  
[d] Stratified, Unstratified and foliated
13. After the addition of water to it, the cement sets and hardens due to  
[a] The heat produced by the chemical action  
[b] The hydration and hydrolysis of the constituent compounds of cement  
[c] Binding action of water  
[d] endothermic reaction
14. The coefficient of linear expansion of concrete is  
[a] Less than that of steel [b] More than that of steel  
[c] Almost same as that of steel [d] Many times more than that of steel
15. The maximum percentage of clay content for making good tiles, is about  
[a] 20 [b] 30 [c] 40 [d] 50
16. Advantage of a clamp compared to a kiln for burning bricks is that  
[a] It takes less time for burning  
[b] It gives more output of first class bricks  
[c] It has less initial cost  
[d] It is suitable when bricks are required in large numbers
17. The usual thickness of plywood board for 3-ply is  
[a] 1 to 3 mm [b] 3 to 5 cm [c] 1 to 3 cm [d] 3 to 5 mm
18. The carbon content in wrought iron varies from  
[a] 0.8 to 1.5% [b] 0.15 to 3% [c] 0.10 to 0.25% [d] 2 to 4.5 %
19. Le chatelier's device is used for determining the  
[a] Compressive strength of cement [b] Tensile strength of cement  
[c] Setting time of concrete [d] Soundness of cement
20. Which material has the highest electrical conductivity?  
[a] Steel [b] Silver [c] Aluminium [d] Lead