

KATHMANDU UNIVERSITY
End Semester Examination
March/April, 2017

Level : B. E.

Year : IV

Course : CIEG 407

Semester : I

Exam Roll No. :

Time : 30 mins.

F. M. : 10

Registration No. :

Date APR 13 2017

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Tick the best answer:

1. The first large public sector irrigation canal in Nepal is:
 - a) Pharping Nahar
 - b) Chandra Nahar
 - c) Bagmati Nahar
 - d) Mahakali Nahar
2. Flood irrigation method of irrigation is best on :
 - a) Level or gently rolling terrain
 - b) Steeply rolling terrain
 - c) All type of land
 - d) Sandy soil terrain
3. Consumptive use of the water for the crop represents:
 - a) The transpiration needs for the crop
 - b) Evaporation for the cropped area
 - c) Evapotranspiration for the cropped area plus the minor quantity required in plant metabolism.
 - d) Total water required for the growth of the plant
4. Permanent wilting point moisture content for the crop represents the:
 - a) Field capacity water
 - b) Capillary water
 - c) Hygroscopic water
 - d) Water of adhesion
5. Which of the following is not correctly matched?
 - a) Rice-Kharif
 - b) Wheat-Rabi
 - c) Barley-Kharif
 - d) Potato-Rabi
6. The minimum size of the sediment that may remain stable in an alluvial channel carrying discharge intensity q , with hydraulic radius R , and bottom slope S is:
 - a) $11RS$
 - b) $9RS$
 - c) RS
 - d) $13RS$
7. The Garret's Diagrams are based on:
 - a) Lacey's Theory
 - b) Khosla's theory
 - c) Bligh's Theory
 - d) Kennedy's Theory
8. The boundary shear stress τ_o , in open canal is given by:
 - a) $\gamma (h^2 / 2)$
 - b) $\gamma R S$
 - c) $\frac{1}{n} R^{2/3} S^{1/2}$
 - d) $C \sqrt{RS}$

where, h =depth, R =hydraulic radius, S =slope, n =Manning's constant, C =Chezy's constant, γ = Specific weight of the fluid.
9. The discharge carried by the regime canal with bed width of 22 m and water depth 2.5 m, is about:
 - a) 32 cumecs
 - b) 22 cumecs
 - c) 42 cumecs
 - d) 12 cumecs
10. The free board in the lined canal is measured between:
 - a) FSL and the top of the lining
 - b) FSL and top of the canal bank
 - c) Top of the bank and top of the lining
 - d) FSL to the canal bed

11. The type of the fall which is generally recommended for very high drop and very low discharge is:
a) Sarda Type fall b) Syphon well drop c) English drop d) Montague fall
12. The canal regulator which is constructed at diversion headworks is known as:
a) Cross regulator b) Canal module
c) Distributaries Head regulator d) Canal head regulator
13. Canal outlets are also called:
a) Canal escape b) Canal module c) Canal off takes d) Canal openings
14. An irrigation canal freely flowing under a drainage channel is known as:
a) An aqueduct b) Siphon aqueduct c) Super passage d) Canal siphon
15. The energy dissipations in a Sarda Type canal fall is done by:
a) Water pool b) Hydraulic jump c) Baffle wall d) Friction blocks
16. Which one of the following does not contribute to water logging?
a) Inadequate drainage b) Seepage from unlined canal
c) Frequent flooding d) Excessive tapping of the ground water
17. The base period of the crop in the field is 120 days, when the duty is 864 hectare per Cumec, the delta value is:
a) 120 cm b) 864 cm c) 100 cm d) 130 cm
18. The type of canal alignment which meets the maximum number of the cross drainage works is:
a) Ridge canal b) Contour canal c) Side slope canal d) Main canal
19. U/S and D/S length of the proposed guide bank at the barrage length of 600 m is:
a) 750 m & 1500 m b) 750 m & 750 m c) 750 m & 150 m d) 750 m & 350 m
20. The Upstream angle of the inclination of the repelling groyne with normal to the bank line is of the order:
a) 5 to 10 degree b) 10 to 30 degree c) 30-50 degree d) 70 to 90 degree