QPC: RD20BTECH425 AR 20 Reg. No | | | | | | | | | | |

GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Fifth Semester – Regular) Examinations, December – 2022

BPCAG5016 – Watershed Planning and Management

(AGE)

Time: 3 hrs Maximum: 70 Marks

Answer ALL Questions

The figures in the right hand margin indicate marks.

PART – A: (Multiple Choice Questions) **(1 x 10 = 10 Marks)**

Q.1. Answer ***ALL*** questions [CO#] [PO#]

a. What are the helping factors of Watershed Management? CO1 PO1

(i) To cope with country's energy crises (ii) Appropriate funds must be allocated

(iii) Alternatives must be provided to the local community (iv) All of the above

b. What is the object of watershed management? CO1 PO1

(i) which maintainsthe quantity of affordable food available to majority of population (ii) Increasing or maintaining standard of buying of growig population

(iii) Increasing Gross National Product and employment opportunities in all areas of nation (iv) All of the above

c. The terms and definitions used in watershed management are: CO1 PO1

(i) Albedo (ii) Aquiclude

(iii) Alluvium (iv) All of the above

d. Material deposited by flowing water is called _____ CO1 PO3

(i) Alluvium (ii) Alluvival Fans

(iii) Albedo (iv) None of these

e. The basic components of watershed cycle are: CO1 PO1

(i) Precipitation (ii) Canopy interaction

(iii) Thorough fall (iv) All of the above

f. The factors which affects of Infiltration Capacity (f): CO2 PO1

(i) Solid density increase, f increase (ii) As degree of aggregation increases f increases

(iii) Soil frost, reduces "f" (iv) All of the above

g. Measurement of infiltration capacity include: CO2 PO1

(i) Direct measurement in water artificially applied (ii) Indirect method: several empirical methods have been developed to estimate total infiltration in a catchment

(iii) Both (i) & (ii) (iv) None of these

h. Hydrological types of burning are CO2 PO3

(i) Natural burning due to lightening (ii) Accidental burning due to negligence

(iii) Prescribed burning due to for land manufacturing (iv) All of the above

i. Hydrological types of fire are: CO1 PO1

(i) Ground fire (ii) Stem fire
(iii) Crown fire (iv) All of the above

j. Extent of damages means: CO2 PO1
(i) Intensity of fire and its duration (ii) Intensity and time of precipitation
(iii) All of the above (iv) Type of vegetation

PART – B: (Short Answer Questions) (2 x 10 = 20 Marks)

Q.2. Answer ***ALL*** questions [CO#] [PO#]

a. What are the different characteristics of watershed? CO1 PO1
b. Elaborate about the problem that arise during watershed development? CO1 PO3
c. demostrate the impact of topographical survey in watershed development projects? CO2 PO3
d. What is the importance of vegetative cover in watershed development in India? CO1 PO1
e. What are the latest land use practices in watershed development CO1 PO1
f. Define the objective of watershed management? Explain about the different factor effecting watershed management? CO3 PO1
g. Explain about the different hydrological data for watershed planning? CO1 PO1
h. Explain the different measures develop for watershed management? CO4 PO1
i. What are the different rain water conservation techniques? CO3 PO3
j. Explain about the roof top harvesting for rain water conservation? CO1 PO1

PART – C: (Long Answer Questions) (10 x 4 = 40 Marks)

Answer ***ALL*** questions Marks [CO#] [PO#]

3. a. Explain about the rain water harvesting system? 5 CO1 PO1
b. Define watershed? 5 CO1 PO3

(OR)

c. What do you mean by hydrological cycle? 5 CO2 PO3
d. Explain about the survey and preparation for watershed development? 5 CO1 PO1
4. a. What is the difference between ex-situ and in –situ storage of rain water harvesting? 5 CO3 PO1
b. What are the different parameter of watershed? 5 CO1 PO3

(OR)

c. Draw the flow chart of watershed modeling 5 CO1 PO1
d. Explain about the different cropping pattern? 5 CO3 PO1
5. a. What is the difference between intensive and extensive cropping system? 5 CO1 PO1
b. Integrated watershed management. Explain about it? 5 CO2 PO3

(OR)

c. Explain water budgeting in watershed development? 5 CO1 PO2
d. Explain about dry farming techniques? 5 CO1 PO2
6. a. Define the study of functional requirement of watershed development structures? 5 CO1 PO1
b. Explain the study of different role of various functionaries in watershed development? 5 CO2 PO3

(OR)

c. What do you mean by interlinking of river? 5 CO1 PO1
d. What are the different interlinking projects going on in India? 5 CO1 PO2

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