CBCS SCHEME

Sixth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Construction Management and Entrepreneurship

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1   a.   Define management. Explain the contributions of Taylor to Scientific Management.
            (08 Marks)
   b.   Briefly explain the various levels and skills required at different levels.   **(08 Marks)**

OR

2   a.   Briefly explain the important steps in planning.   **(08 Marks)**
   b.   Write difference between strategic planning and tactical planning.   **(08 Marks)**

Module-2

3   a.   What is organization? Explain the purpose and nature of an organization.   **(08 Marks)**
   b.   What is appropriate span of control? Explain the factors affect the span of management.
            (08 Marks)

OR

4   a.   What is Department? Mention the types and explain the departmentation by geographic area.
            (08 Marks)
   b.   Explain the steps in the selection procedure of an organization.   **(08 Marks)**

Module-3

5   a.   Explain the comparison of Maslow's and Hertberg theories of Human motivation.   **(08 Marks)**
   b.   What are the different steps involved in controlled process.   **(08 Marks)**

OR

6   a.   Briefly explain the Maslow's hierarchy needs.   **(08 Marks)**
   b.   Explain some of the methods of establishing control.   **(08 Marks)**

Module-4

7   a.   Define the term 'Entrepreneur'. Explain the functions of an Entrepreneur.   **(08 Marks)**
   b.   Explain the steps involved in Entrepreneurial process.   **(08 Marks)**

OR

8   a.   Define 'Small Scale Industry' and state the characteristics of a SSI.   **(08 Marks)**
   b.   Explain the WTO, state its functions.   **(08 Marks)**

Module-5

9   a.   Explain the role of TECSOK in promotion of small enterprises in Karnataka.   **(08 Marks)**
   b.   Explain the important activities in establishing small enterprises, with the help of KSSIDC.
            (08 Marks)

OR

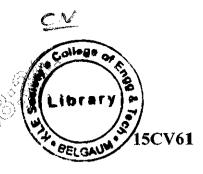10   a.   Explain the role of KSFC in promotion of small enterprise.   **(08 Marks)**
    b.   Write short notes on :
      (i) SISI   (ii) SIDBI   (iii) Project Identification   (iv) Barrier in Entrepreneur   **(08 Marks)**

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USN ☐☐☐☐☐☐☐☐☐☐ **15CV61**

Sixth Semester B.E. Degree Examination, June/July 2018
Construction Management and Entrepreneurship

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

1   a.   Define Construction management. Explain the objectives of construction management.   **(08 Marks)**

    b.   What are the functions of management? Explain any two of them.   **(08 Marks)**

OR

2   a.   What is construction planning? List the objectives of construction planning.   **(06 Marks)**

    b.   Explain Bar chart or Gantt chart. Write its limitations.   **(04 Marks)**

    c.   Draw the network for the project based on the following data of events:
Find Early start time, Early finish time, Late finish time, and determine the least number of days required to complete the work. Draw the critical path.

Event	Duration (Days)	Preceders
A	2	-
B	4	-
C	1	A
D	6	B
E	7	C, D

(06 Marks)

Module-2

3   a.   Explain the importance of resource management in the construction of a project.   **(08 Marks)**

    b.   Explain (i) Minimum wages act 1948 (ii) Labour production rate of productivity.   **(08 Marks)**

OR

4   a.   Explain the advantages of utilization of construction equipments in construction field. List the various classifications of equipments.   **(08 Marks)**

    b.   Describe material management and objectives of material management.   **(08 Marks)**

Module-3

5   a.   Define quality. Describe quality control and quality assurance.   **(08 Marks)**

    b.   Explain the importance of safety in construction. Explain the safety measures during (i) Excavation (ii) Drilling and blasting   **(08 Marks)**

OR

6   a.   Describe the safety insurance. Explain constructors all risk insurance.   **(08 Marks)**

    b.   Differentiate between morals and values.   **(04 Marks)**

    c.   List the professional rights.   **(04 Marks)**

Module-4

7   a.   What is economics? List the goals of economics.   **(08 Marks)**

    b.   Differentiate between Microeconomics and Macroeconomics.   **(08 Marks)**

1 of 2

OR

8 a. Explain : (i) Time value of money (ii) Simple interest (iii) Compound interest. **(10 Marks)**

b. Mr. X is planning to build his own house. He plans to deposit Rs. 40,000/- every year for next 10 years in a bank. The bank gives 12% interest rate compound annually. Find the maturity value of his account after 10 year. **(06 Marks)**

Module-5

9 a. Explain in brief the role of entrepreneurship in economic development. **(08 Marks)**

b. What do you mean by small-scale industry? List the characteristics of small scale industries. **(08 Marks)**

OR

10 a. What is business plan? Explain the importance of business plan. **(08 Marks)**

b. Explain in detail the contents of a good project report. **(08 Marks)**

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Visvesvaraya Technological University, Belagavi

MODEL QUESTION PAPER- 6th Semester , B.E (CBCS) CV

Course : 15CV61 –Construction Management and Entrepreneurship

Time : 3 hours   Max Marks : 80

Note : (1) Answer any FIVE full questions selecting any one full question from each module.

(2) Assume missing data suitably and clearly mention in the answer script about it

Module-1

1a	Identify the Stake holders in a construction project and Explain the Roles of Contractor and PMC Consultants	08
1b	Define Lag time and Lead Time in a PND ? explain with diagram the different relationship between predecessor and successor activities using this concept	08

OR

2a	Explain the Concept of Work break down Structure with an Example	06
2b	Using CPM Method determine " Critical activities" and Critical path for the network given below. What is project duration ?	10

Module-2

3a	List out various Inventory Control Techniques adopted in Material Management and Explain A-B-C analysis ?	08
3b	For a typical Project of Cost Rs Cr 900 , has its Direct Labour cost of 22% of Gross. Productive labour cost is 35% of labour Cost. By optimization of Work , there was 38% reduction in Labour non Productivity as compared to earlier. Estimate the total Cost of Saving in Labour productivity by above process in terms of Rs Cr and in % wrt Project Cost , Labour Cost and Productive labour Cost	08

OR

4a	List out Factors behind the Selection of Construction equipment's perform assigned tasks / Project's need	04
4b	An Excavator with a bucket capacity is 1.5 cum and rated horse power is 180HP is used for excavation of ordinary soil. Following information is available 1. Capital cost of excavator = Rs80 lakhs , Charged to the project : 2.25% per month of capital cost , 2. Employment hrs / month = 250 hrs ,Technical life 5 yrs , salvage value = 10% of Capital Cost 3. Prime mover = diesel , load factor = 0.85 , crank case capacity = 30 lit. , time between oil change = 100 hours. 4. Operational correction factors = 0.7 , load factor = 0.85 , bucket swing factor = 1.00 , bucket fill factor = 0.9 5. Operational manpower cost = Rs 175 / hr	12

	6. Time cycle for 1 operation of excavator = 45sec for 55 min hour.	
	7. Routine maintenance and major repair cost = 120% of depreciation cost.	
	8. Diesel rate = rs 70 / lit and lube rate is rs 200 / lit	
	Estimate :	
	• Hourly production rate of the excavator in cum / hr	
	• Cost of ownership and operation in rs/ hr	
	• Unit rate of equipment operation for Excavatorin Rs / cum.	
	• Estimate The Number of Excavator needed to do a Job of Earthwork in Sub Grade having a Compacted Volume Quantity of 70,000 Cum , to be executed in 24 days with 10 hrs working per day.	
	Determine the number of dumpers required for transportation if average lead from borrow area to site is 8kms and dumper have a capacity of 12 cum , its forward speed is 15 kmph , backward speed is 30 kmph , unloading time = 4 min , repositioning time = 2 min. performance efficiency factor = 50min hour time	

Module-3

5a	Briefly Explain the construction Quality process.	06
5b	List out broad principles of quality management systems as outlined under ISO 9000	04
5c	Describe safety measures to be adopted while doing Hot Bituminous Works to avoid accidents	06

OR

6a	Define Values , Morals and Ethics and List out seven ethical principles applicable to construction industry	06
6b	What is importance of tool box meeting and good house keeping in construction safety management?	04
6c	Explain " Quality Audit and its Process"	06

Module-4

7a	Discuss briefly " concept of engineering economic study and its principles"	08
7b	What is the Total Capitalized cost of a building which have construction cost Rs 1,50,000/- immediately , Rs 15000 expenses each year for first 5 yrs and annual year end maintenance cost of Rs 5000/- plus the expenditure of Rs 35000 at the end of each 10years period for replacement purpose ? assume rate of interest = 9.5% P.a	08

OR

8a	Cash Flow for two projects X & Y are given below using annual worth method make a selection from following alternatives : assume min attractive rate of return i*=10% End of Year 0 1 2 3 4 PRO X -50000 5000 17500 30000 42500 PROJ Y -50000 40000 15000 15000 15000	10
8b	What is present equivalent money value of Rs 75,000/- (a) 5 years from now (b) 5 years before today , take discounting rate = 12% compounded quarterly	06

Module-5

9a	Define Micro , small and medium enterprises ? list and explain characteristics of MSME	08
9b	List and Explain the Different sources of Finance for Entrepreneur	08

OR

10a	What id DPR , Discuss the guidelines for the preparation of model project report for starting new venture	08
10b	Explain the stages in Entrepreneur / entrepreneurial process	08

Model Question Paper -1 with effect from 2020-21(CBCS Scheme)

USN

Fifth Semester B.E. Degree Examination
Construction Management and Entrepreneurship

TIME: 03 Hours   **Max. Marks: 100**

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.
           02. Use of Normal Distribution Function table is permitted.

		Module – 1	Marks
Q.1	**(a)**	Discuss the functions of management.	8
	(b)	The activity data of a project is given in the Table below: Draw the network diagram, identify the critical path and Project duration using CPM.	8
	(c)	Mention the limitations of Bar Chart.	4
		OR	
Q.2	**(a)**	Four activities to be undertaken in series for the completion of a project are as follows: Estimate the time required at (i) 95% probability to complete the project (ii) 5 % probability to complete the project	10
	(b)	Discuss on Autocratic and Democratic Management Styles.	4
	(c)	Explain the Strategic and Operational Plans.	6
		Module – 2	
Q.3	**(a)**	What are the factors affecting the labour productivity?	8
	(b)	Estimate the hourly production in bulk volume (LCM) of a backhoe with bucket capacity of 0.96 cubic meters that is employed on excavation of a foundation, which is 4m deep in hard digging soil. The excavated earth is to be loaded in waiting dump trucks, placed at a swing angle of 75^0. The expected performance efficiency is 83%. Assume the ideal output of face shovel with given bucket capacity is 150 LCM. Assume and list the suitable corrections to be applied.	10
	(c)	Give any four advantages of material management.	2
		OR	
Q.4	**(a)**	Enumerate all the types and sub types of the different construction equipment.	10
	(b)	What is Inventory Control? What are the functions of inventory control.	5

Table for Q.1 (b):

Activity	Preceding Activity	Duration (Days)
X	--	5
Y	X	2
C	--	6
D	--	4
E	D	7
F	Y, C, E	3

Table for Q.2 (a):

Activity	Optimistic time (days)	Most likely time (days)	Pessimistic time (days)
P	8	14	22
Q	7	21	32
R	8	19	28
S	28	40	52

	(c)	The purchase value of a crawler tractor is Rs. 30,00,000/-. Its assessed resale value after using for 5 years is 10% of the delivered price. The equipment is planned to operate 2000 hours per year. Calculate its annual and hourly depreciation.	5
		Module – 3	
Q.5	(a)	Differentiate between quality control and quality assurance.	4
	(b)	Explain the safety procedures to be adopted during excavation.	8
	(c)	Discuss on the following (i) Gifts and bribes (ii) whistle blowing (iii) engineering ethics	8
		OR	
Q.6	(a)	What are the safety procedures to be adopted during drilling and blasting.	6
	(b)	Explain the TQM process in construction.	8
	(c)	Briefly write about Morals and integrity in workplace.	6
		Module – 4	
Q.7	(a)	Differentiate between micro and macro economics.	8
	(b)	An engineer has two bids for an excavator to be installed in a new building project. The details of the bids for the excavator are as follows: Engineer's estimate <table><tr><td>Bid</td><td>Initial Cost (Rupees)</td><td>Service life (years)</td><td>Annual Operating & Maintenance Cost (Rupees)</td></tr><tr><td>Bid 'A'</td><td>10,50,000/-</td><td>15</td><td>60,000</td></tr><tr><td>Bid 'B'</td><td>11,00,000/-</td><td>15</td><td>70,500</td></tr></table> Determine which bid should be accepted, based on the present worth method of comparison assuming 18% interest rate, compounded annually.	12
		OR	
Q.8	(a)	Define the following terms related to engineering economics: (i) Present worth (ii) Future worth (iii)Annuities (iv) Salvage value	8
	(b)	The fixed costs for a company are Rs. 60,000/-. The estimated sales for the period are valued at Rs. 2,00,000/-. The variable cost per unit for the single product is Rs. 5/-. If each unit sells at Rs. 25/- and the number of units involved coincides with the expected volume of output. Construct the break even chart and determine the following: (i) The breakeven point (ii) The profit earned at a turnover of Rs. 1, 25, 000/-. (iii) Margin of safety (iv) Angle of incidence	12
		Module – 5	
Q.9	(a)	Write briefly about international entrepreneurship opportunities.	4
	(b)	Enumerate the barriers for entrepreneurship.	8
	(c)	Discuss in detail about the project report for starting a new venture.	8
		OR	
Q.10	(a)	Mention the uses of direct foreign investment.	4
	(b)	Discuss the characteristics of entrepreneur.	8
	(c)	Explain the scope and role of following agencies: i. KIADB ii. SIDBI	8

Table showing the Bloom's Taxonomy Level, Course Outcome and Programme Outcome				
Question		**Bloom's Taxonomy Level attached**	**Course Outcome**	**Programme Outcome**
Q.1	(a)	L1	1	1
	(b)	L3	1	1, 2
	(c)	L 1	1	1, 2
Q.2	(a)	L3	1	1, 2
	(b)	L1	1	1, 2
	(c)	L2	1	1, 2
Q.3	(a)	L1	2	1, 2
	(b)	L3	2	1, 2
	(c)	L1	2	1, 2
Q.4	(a)	L1	2	1, 2
	(b)	L2	2	1, 2
	(c)	L3	2	1, 2
Q.5	(a)	L1	2	1, 2
	(b)	L2	2	1, 2
	(c)	L1	4	1, 2
Q.6	(a)	L2	2	8, 11
	(b)	L1	2	8, 11
	(c)	L1	4	1, 2
Q.7	(a)	L1	3	11
	(b)	L4	3	11
Q.8	(a)	L1	3	1, 2
	(b)	L3	3	1, 2
Q.9	(a)	L1	4	6
	(b)	L1	4	1, 2
	(c)	L2	4	6
Q.10	(a)	L1	4	6
	(b)	L2	4	1, 2
	(c)	L1	4	1, 2

Bloom's Taxonomy Levels	**Lower order thinking skills**		
	Remembering (knowledge):L_1	Understanding (Comprehension): L_2	Applying (Application): L_3
	Higher order thinking skills		
	Analyzing (Analysis): L_4	Valuating (Evaluation): L_5	Creating (Synthesis): L_6

CBCS SCHEME

USN | | | | | | | | | |

15CV61

Sixth Semester B.E. Degree Examination, June/July 2018
Construction Management and Entrepreneurship

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

1 a. Define Construction management. Explain the objectives of construction management. **(08 Marks)**

   b. What are the functions of management? Explain any two of them. **(08 Marks)**

OR

2 a. What is construction planning? List the objectives of construction planning. **(06 Marks)**

   b. Explain Bar chart or Gantt chart. Write its limitations. **(04 Marks)**

   c. Draw the network for the project based on the following data of events:
   Find Early start time, Early finish time, Late finish time, and determine the least number of days required to complete the work. Draw the critical path.

Event	Duration (Days)	Preceders
A	2	-
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   (06 Marks)

Module-2

3 a. Explain the importance of resource management in the construction of a project. **(08 Marks)**

   b. Explain (i) Minimum wages act 1948 (ii) Labour production rate of productivity. **(08 Marks)**

OR

4 a. Explain the advantages of utilization of construction equipments in construction field. List the various classifications of equipments. **(08 Marks)**

   b. Describe material management and objectives of material management. **(08 Marks)**

Module-3

5 a. Define quality. Describe quality control and quality assurance. **(08 Marks)**

   b. Explain the importance of safety in construction. Explain the safety measures during (i) Excavation (ii) Drilling and blasting **(08 Marks)**

OR

6 a. Describe the safety insurance. Explain constructors all risk insurance. **(08 Marks)**

   b. Differentiate between morals and values. **(04 Marks)**

   c. List the professional rights. **(04 Marks)**

Module-4

7 a. What is economics? List the goals of economics. **(08 Marks)**

   b. Differentiate between Microeconomics and Macroeconomics. **(08 Marks)**

OR

8   a.   Explain : (i) Time value of money (ii) Simple interest (iii) Compound interest.   **(10 Marks)**
    b.   Mr. X is planning to build his own house. He plans to deposit Rs. 40,000/- every year for next 10 years in a bank. The bank gives 12% interest rate compound annually. Find the maturity value of his account after 10 year.   **(06 Marks)**

Module-5

9   a.   Explain in brief the role of entrepreneurship in economic development.   **(08 Marks)**
    b.   What do you mean by small-scale industry? List the characteristics of small scale industries.   **(08 Marks)**

OR

10   a.   What is business plan? Explain the importance of business plan.   **(08 Marks)**
     b.   Explain in detail the contents of a good project report.   **(08 Marks)**

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15CV61

Sixth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Construction Management and Entrepreneurship

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(08 Marks)
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   b. What is appropriate span of control? Explain the factors affect the span of management.
(08 Marks)

OR

4 a. What is Department? Mention the types and explain the departmentation by geographic area.
(08 Marks)
   b. Explain the steps in the selection procedure of an organization. **(08 Marks)**

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8 a. Define 'Small Scale Industry' and state the characteristics of a SSI. **(08 Marks)**
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9 a. Explain the role of TECSOK in promotion of small enterprises in Karnataka. **(08 Marks)**
   b. Explain the important activities in establishing small enterprises, with the help of KSSIDC.
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OR

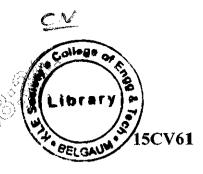10 a. Explain the role of KSFC in promotion of small enterprise. **(08 Marks)**
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CBCS SCHEME

15CV61

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Construction Management and Entrepreneurship

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                                                                                 (06 Marks)

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3   a.   Explain the importance of resource management in the construction of a project.   **(08 Marks)**
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OR

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Module-4

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9 a. Explain in brief the role of entrepreneurship in economic development. **(08 Marks)**
  b. What do you mean by small-scale industry? List the characteristics of small scale industries. **(08 Marks)**

OR

10 a. What is business plan? Explain the importance of business plan. **(08 Marks)**
  b. Explain in detail the contents of a good project report. **(08 Marks)**

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15CV61

Visvesvaraya Technological University, Belagavi

MODEL QUESTION PAPER

6thSemester , B.E (CBCS) CV

Course : 15CV61 –Construction Management and Entrepreneurship

Time : 3 hours   Max Marks : 80

Note : (1) Answer any FIVE full questions selecting any one full question from each module.

(2) Assume missing data suitably and clearly mention in the answer script about it

Module-1

1a	Define Management and List out management functions or process	04
1b	Define " Activity Time" , Event Time , Critical Path and Total Float	08
1c	Compute the Project duration of PND given Below	04

	12			18			10			3	
	A	FS=4		B	FS= -5		C	FS=0		D	
	1.1			1.2			1.3			1.4	

OR

2a	List out different types of construction organization structure and explain " Matrix Organization Structure"	08
2b	Explain the Concept of Scheduling through " Bar or Gantt chart " and Mile stone Chart" ? How Mile stone chart is Converted to Network Diagram	08

Module-2

3a	Explain Main Provisions of the Minimum wages act 1948 (as amended now)	06
3b	A labor gang consisting of 4 Skilled , 8 Unskilled and 2 Highly Skilled will do 20 MT of Rebar Work at Ground Floor in 8 Hrs duration per Day. The building is GF+ 2 Upper floors and each floor have 1200MT of Bar bending work. The productivity decreases at the rate of 5% for each floor. The work needs to be completed in 24 days of 8 hours working per day. Estimate following : - Total team hour required to complete the activity. - Total number of Labor gangs required to finish the activity. - Total work force involved - total man hours and man days required for the activity - Unit labor Cost for Activity by adopting Per day rate of Rs 750 for Highly Skilled ,Rs 550 for Skilled and Rs 325 for Unskilled workers.	12

OR

4a	Define Workers productivity Standard and list out typical factors affecting the workers production efficiency	06
4b	Define " Depreciation" , Salvage Value & Book Value. Work out Year by year Depreciation cost and its Book Value using Straight Line Method and Declining balance method for an Excavator whose purchase Price is Rs 75Lakhs , Technical Life is 5 yrs , Salvage value = 15% of capital Cost	12

Module-3

5a	Explain " Total Quality Management " , " Cost of Quality" and " Quality Control" as applicable to construction	12
5b	Describe safety measures to be adopted while doing open excavation of earth and rock to avoid accidents	06

OR

6a	Which are domains of Ethics ? List out 7 Ethical conduct in compliance with ethical principles as applicable in construction	06
6b	Define " Quality" and Explain " Construction Quality Process" and " Quality Assurance"	12

Module-4

7a	A concrete mixer has the following cash flow details; Initial purchase price = Rs.775000, Annual operating and maintenance cost = Rs.50000 Salvage value = Rs.250000, Useful life = 10 years In addition one operator is required to operate the concrete mixer at cost of Rs.50 per hour. The production (preparation) rate of concrete of the mixer is 0.25m3 per hour. The revenue to be generated from production of 1m3 of concrete is Rs.2000. The interest rate is 10% per year. How many „ cum " of concrete need to be produced per year so that the revenue generated break-evens with the expenditure?	08
7b	A company offers 12% interest rate on deposit , what is the effective rate of interest if compounded (1) Monthly (2) Quarterly (3) Semi- annually. Also Calculate Nominal Interest rate , if effective rate is 10% p.a , compounded semi- annually	08

OR

8a	Type A design of a dam costs Rs 50 crore to construct and an expenses of Rs 7.5 crore every year to operate and maintain it. Type B design of the dam on the other hand would require Rs 75 crore to construct and an annual expenses of Rs 5 crore to operate and maintain. Both the designs have considered 100ys as design life of dam. The minimum required rate of return is 5% , which design should be given a go-ahead.	06
8b	There are two alternatives for purchasing a concrete mixer. Both the alternatives have same useful life. The cash flow details of alternatives are as follows; **Alternative-1:** Initial purchase cost = Rs.3,00,000, Annual operating and maintenance cost = Rs.20,000, Expected salvage value = Rs.1,25,000, Useful life = 5 years. Annual revenue generated = 75000 /- **Alternative-2:** Initial purchase cost = Rs.2,00,000, Annual operating and maintenance cost = Rs.35,000, Expected salvage value = Rs.70,000, Useful life = 5 years. Annual revenue generated = Rs 50000 Using present worth method, find out which alternative should be selected, if the rate of interest is 10% per year.	10

Module-5

9a	Define entrepreneur ? explain the functions of an entrepreneur	08
9b	Define a Business plan , Explain Business Planning Process	08

OR

10a	What are various ways of entry into international business	08
10b	Write short Notes on (a) TECKSOK (B) KIADB (C) KSSIDC (D) DIC – Single window agency	08