

VPM's
Programme: PGP (2014-15)
Second Semester Examination July 2015 (Operations)

Subject	Project Management & Productivity Techniques		
Roll No.		Marks	60 Marks
Total No. of Questions	7	Duration	3 Hours
Total No. of printed pages		Date	12-07-2015

Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.

Q1) (Compulsory)

- (a).** Solve the Supply/ Demand Transportation problem by using Vogel's Approximation Method. The figures in the cells of each Store/ Destination indicate cost of transportation in Rs. per unit, from the respective Store to that Destination. Then achieve optimality by Modified Distribution. -10 Marks.

Destinations, D-> Stores, S V	D1	D2	D3	D4	Supply (Qty)
S1	35	16	20	30	15
S2	15	18	19	32	13
<i>Demand(Qty)</i>	8	6	7	7	28/28

- (b).** A project has the tabulated activities & their duration in days given below:

Activ-ity	A	B	C	D	E	F	G	H	I
Days	23	8	20	16	24	18	19	4	10

Precedence logic is as under: A, B & C are all starting together from Start event.

1.	Activities D & E cannot start till A completed.
2.	F cannot start till B & D both, are completed.
3.	G cannot start till G completed.
4.	H cannot start till B & G completed
5.	I cannot start till F & G completed.

Find minimum time of completion & the critical path. – 10 Marks

Attempt Any FOUR from the Remaining SIX Questions

Q2) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- What is a Project & its life cycle? Elaborate with an example.
- Briefly explain the six phases of a typical Project.
- Write a short note on Work Breakdown Sheet (WBS).

Q3) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- What are the important considerations for an entrepreneur in Project Identification?
- Enumerate the four stages of Project Formulation & briefly cover the main aspects of a Preliminary Feasibility Study.
- What is a DPR? What aspects constitute its Main Chapters?

Q4) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- What regional factors are considered for location of a Project?

- b) The monthly requirement of Tractors at four Agro-Industrial towns of Maharashtra & their matrix co-ordinates are tabulated below.

No.	Name of Town	Tractors Demand	x	y
1	Osmanabad	100	40	110
2	Sholapur	120	130	120
3	Aurangabad	160	90	100
4	Washim	130	80	80

Find the ideal Project Location co-ordinates by Centre of Gravity method.

- c) Write a short note on Tangible & Intangible factors considered in actual siting of a Project.

Q5) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) Differentiate between Non- discounted Cash Flow & Discounted Cash Flow techniques of Financial Appraisal.
 b) Briefly explain the four essential ingredients of data required for Discounted Cash Flow techniques.
 c) Enumerate the major heads under Cash outflows.

Q6) Any one from (a) or (b) ————— 10 Marks

- a) The likely investment on a Project is Rs. 15 Lakhs. It is expected to take two years for implementation of the project & it will earn profits from the third year onwards. The estimated profits, tax & depreciation are as under:

Category	3 rd Year	4 th Year	5 th Year	6 th Year	7 th Year
Operating Profit (Rs.)	1.5 Lakhs	1.75 Lakhs	2 Lakhs	2.25 Lakhs	2 Lakhs
Tax (Rs.)	0.5 Lakhs	0.6 Lakhs	0.68 Lakhs	0.75 lakhs	0.7 Lakhs
Depreciation(Rs.)	3.3 Lakhs	2.21 Lakhs	1.48 Lakhs	1 lakh	0.7 Lakhs

Calculate the Pay-back period for the project.

- b) Calculate the Profitability Index for the following two projects & compare it with the Net Present Value & offer your comments:

	Project A	Project B
Initial Value of Investment (Cash Outflow)	Rs. 6 Lakhs	Rs. 12 Lakhs
Present Value of Cash In-flows	Rs. 8 Lakhs	Rs. 14.5 Lakhs

Q7) Any two from (a) or (b) or (c) ————— (5x2) = 10 Marks

- a) Define Project Evaluation & briefly enumerate its Objectives.
 b) What is Post Audit (Post Project Evaluation) undertaken? What are its objectives.
 c) Write a short note on different types of Post Audit (Post Project Evaluation) undertaken for public sector undertakings.