

INTERMEDIATE EXAMINATION

December 2015

P-9(OMS)
Syllabus 2012

Operation Management and Information Systems

Time Allowed: 3 Hours

Full Marks: 100

*This paper contains three questions. All questions are compulsory,
subject to instruction provided against each question.*

All workings must form part of your answer.

Assumptions, if any, must be clearly indicated.

The figures in the margin on the right side indicate full marks.

1. Answer *all* questions. 2×10=20

- (a) Identify four principal functions of an operating system with reference to Operation Management.
- (b) List the various elements of the framework for Project Management Issues.
- (c) Categorise spare parts for stocking policy analysis under Spare Parts Management.
- (d) Define Quality Trilogy under Total Quality Management.
- (e) State the formula for maintenance cost index (as a percentage) to measure maintenance effectiveness.
- (f) An analyst wants to obtain a cycle time estimate that is within $\pm 5\%$ of the true value. A preliminary run of 20 cycles took 40 minutes to complete and had a calculated standard deviation of 0.3 minutes. Calculate the coefficient of variation to be used for computing the sample size for the forthcoming time study.
- (g) Distinguish between 'Private Key' and 'Public Key'.
- (h) Explain the term 'rescue maintenance' under System Maintenance.
- (i) Identify different functions commonly performed by Database System Utilities.
- (j) Identify characteristics of a good quality information.

2. Answer *any three* questions. 16×3=48

- (a) (i) "Higher productivity has manifold advantages." State these advantages. 6
- (ii) A faculty in a college is planned to rise to strength of 60 staff members and then to remain at that level. The wastage of recruits depends upon their length of service and is as follows: 3+4=7

Year	1	2	3	4	5	6	7	8	9	10
Total % who left up to end of year	6	36	57	66	71	77	81	87	96	100

- (I) Find the number of staff members to be recruited every year.
- (II) If there are seven posts of Head of Department for which length of service is the only criterion of promotion, what will be average length of service after which a new entrant should expect promotion?
- (iii) State three major purposes of Materials Budget. 3

Please Turn Over

