BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: BE **SEMESTER: VI**
BRANCH: AL **SESSION : SP/2018**

SUBJECT : PE6009 ENGINEERING ECONOMY

TIME: 1.5 HOURS **FULL MARKS: 25**

INSTRUCTIONS:
1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

Q1 Journalize the following transactions in the books of M/s Jha & Sons for January 2018: [5]
Jan 4: Started business with Cash Rs. 50,000; Plant Rs. 24,000; Stock Rs. 4,000.
Jan 10: Bought goods from M/s Mishra Bros. for Rs. 5,000 at 10% trade discount.
Jan 18: Sold Goods for Cash Rs. 8,000 and to Mr. Shrivastava for Rs. 10,000.
Jan 21: Mr. Shrivastava settled his account by cheque, less discount Rs. 600.
Jan 26: Paid conveyance to manager Rs. 450.

Q2 (a) Indicate where the following items will be shown in various components of Trading Account and P & L A/c: [2]
Bad debts, Royalty on production, Loss on sale of assets, Outstanding wages.

(b) ABC PLC has the following assets and liabilities as on 31st January 2018: [3]
Goodwill Rs. 75,00,000; Fixed assets Rs. 75,00,000; Cash in hand Rs. 25,00,000; Cash in bank Rs. 50,00,000; Inventory Rs. 50,00,000; Receivables Rs. 100,00,000; Trade payable Rs. 100,00,000; Income tax payable Rs. 60,00,000; Bank loan Rs. 50,00,000;
Calculate quick ratio to judge company's asset liquidity.

Q3 (a) What is meant by shunk cost? [2]

(b) John's wealthy uncle gives John Rs. 75,000 when he passed out from high school. This amount is enough to put him through college (5 years at Rs. 15,000 per year). It is also enough for him to open a business making web pages for small companies instead of going to college. He estimates he would make Rs. 20,000 per year with this business. What will be the opportunity cost and incremental cost for John in 5 year span, if he decides to go to college? [3]

Q4 In 365 days a company follows 8 festive holidays and all Sundays as weekly offs. It works for 8 hours a day for 5 days and 4 hours on Saturday. (i) The machine room works on a 90% capacity and the normal maintenance time is assumed to be 10% on working capacity. The total estimated cost for 40 machines is Rs. 72,57,000. Calculate the machine hour rate for each machine. (ii) The company pays workers at the rate of Rs. 5 per hour on normal working days and double wage rate on Saturdays. Find total yearly labour cost for 40 machinists. [5]

Q5 (a) What is meant by break-even point? Draw a figure to illustrate your answer. [2]

(b) Product A has a P/V ratio of 24%. Fixed operating costs directly attributable to Product A during the quarter IV of the financial year 2017-2018 will be Rs. 2,70,000. Calculate the sales revenue required to achieve a quarterly profit of Rs. 90,000. [3]

Q6 For a particular product, the following information is given: Selling price per unit: Rs. 100; Variable cost per unit: Rs. 60; Fixed costs: Rs. 10,00,000. Due to inflation the variable costs have increased by 10%, while fixed costs have increased by 5%. If the break-even quantity is to remain constant by what percentage should the Sales price be raised? [5]

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