S.B. Roll No.

CONSTRUCTION MANAGEMENT & ACCCOUNTS

6th Exam/Civil/5128/8051/Dec'11

Duratio	on : 3 hrs	M.Marks75
	Section-A	
Q.1 i) ii) iii) iv) v)	Fill in the blanks: Excavating parts of the machine consists of endless chains. Agreement is signed between and contractor. The first minimum wages act was implemented in Suspense register is used to maintain record. When deficiency of resource exist then slack occurs.	15
b) i) ii) iii) iv) vi)	State true or false: Output of concrete mixture is expressed in cubic meters per day. Bar charts were developed by Henry Ford. Most draglines handle one size of bucket. Muster roll and labour roll are same things. Running payments are done periodically.	
Section - B		
Q.2 i) ii) iii) iv) v) vi) vii) viii) Note:	Attempt any six questions: What is the difference between tender and contract? Write few lines about construction planning and its advantages? Distinguish between technical sanction and administrative approval. Explain principles of inspection in construction industry. What are the causes of accidents on construction sites? Write the various methods of recording progress on site. What do you understand by CPM? What do you understand by work charged establishment? Section -C Attempt any three questions:	6x5 = 30
O3.(a)	What are the limitation of bar charts?	5
(b)	What is the significance of construction management?	5
Q4.	What are the principles of storing and stacking materials at site?	10
Q5.	How will you do scheduling of work by network techniques?	10
Q6.	Define organization and its different types?	10

Q6. Define organization and its different types? S.B. Roll No.

MODREN ELECTRICTRACTION SYSTEM

6th Exam/Elect/5205/6252/Dec'11

Duration : 3 hrs

M.Marks: 75

10x1.5=15

6x5=30

3x10=30

- Q. 1 Fill in the blanks in the blanks
 - a. Regenerative breaking is more efficient in case of ______ system.
 - b. Insulation resistance of a new equipment is ______ than that of same equipment after few years of service.
 - c. For suburban service ______ system more economical for electric traction.
 - d. Unlike rotary induction motor, in a linear motor one of the two either field or induced current conductors may have ______ dimensions.
 - e. In case motor is made to function as generator, its generated emf should be increased and it is only possible with ______ in excitation level.
 - f. The three type of electric breaking which is applicable to common type of electric motors are
 - (i) _____
 - (ii) _____
 - (iii) _____
 - g. Linear induction motor is employed for speed more than _____ km.
 - h. Mostly d.c. motor is employed for electric traction.
 - i. Usual value of acceleration for passenger service is _____ to ____ Kmphps.
 - j. When the actual speed of run is less, then schedule speed will be _____.

Section B

Note: Attempt any six questions

- Q2 i. Why D.C. system is preferred for suburban and urban services?
 - ii. Why the series motor is considered ideally suited for traction work?
 - iii. State the main requirements for an ideal traction system.
 - vi. What is meant by schedule speed of a train?
 - v. Discuss briefly the methods of speed control of single phase ac series motors.
 - vi. Explain the rheostatic breaking and regenerative breaking employed with D.C. motors.
 - vii. What are the advantages of electric derive and state the limitations of its use.
 - viii. Describe the special features of a traction motor.

Section C

Note: Attempt any three questions

- Q3. What are the advantages of regenerative breaking Explain how regenerative breaking can be obtained in D.C. locomotives.
- Q4 What are the systems of electric traction? Explain why single phase ac electrification is superseding the other type of systems.
- Q5 Describe the various types of air conditioning installation used in Indian railway coaches?
- Q6 Explain speed-torque characteristics are desirable traction motors operating:
 - (i) Suburban service

(ii) Main line service.

6x5=30

3x10=30

S.B. Roll No.

OPTICAL FIBRE COMMUNICATION

6th Exam/ELECT/6652/5204/Dec-2011

Max. Marks: 75 Duration: 3 Hrs. Section-A 01. Fill in the blanks 10x1.5=15 (i) Refractive index of the medium is defined as .

- (ii) Underwater cable is also known as
- (iii) At certain critical radius the macro bending losses become observers and this critical valve of radius is called as _____.
- (iv) LED's have ______ efficiency than laser diodes.
 (v) LED's are ______ sensitive to temperature.
- (vi) An optical detector converts optical signal into
- (vii) The optical switches are components.
- (viii) Applying glue the splicing losses are reduced to dB.
- (ix) In optical communication SONET means _____.
- (x) Dynamic extraction ratio DER = _____.

Section-B

Q2. Attempt any six questions

- (i) In optical fiber communication, what do you mean by total internal reflection and critical propagation angle?
- (ii) Discuss the structure of underwater cable.
- (iii) What do you mean by intramodal dispersion?
- (iv) Discuss stimulated brillouin scattering.
- (v) Input power launched into a 10km optical fiber is 150micro-watt and the output power received is 5 micro-watt. Find
 - (a) overall signal attention or loss, assuming there are no connectors or splices and
 - (b) Signal attenuation per km for the fiber.
- (vi) Mention at least five major characteristics of a light source used in optical fiber communication.
- (vii) Write a short note on stimulated emission.
- (viii) What are the advantages and disadvantages of LED when it is used as source for optical fiber communication?

Section-C

- 03. Attempt any three questions
 - (i) Write a note on
 - (a) ND: YAG laser
 - (b) Glass fiber laser
 - (ii) What are the compatibility requirements of an optical detection?
 - (iii) What do you mean by fiber splicing? How fusion splicing done? Give its merits and demerits.
 - (iv) Explain the principle and working of a semiconductor optical amplifier (SOA).

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COMMUNICATION SYSTEMS

6th Exam/ELECT/6452/Dec-2011

Section-A 01. Do as directed: (i) Frequencies in the range of 3mhz to 30mhz are referred to as HF/VHF/UHF. (ii) For efficient radiation at 30khz, the length of antenna should be 2.5km/10km/30m. (iii) The information bearing signal is also called the carrier/baseband signal/modulated signal. (iv) The power in the lower side band of an AM modulated wave is less than/equal to/greater than the power in the upper sideband. (v) For better image frequency rejection a very low/low/high IF is preferred. (vi) In phase modulation, the modulation index is directly proportional/indirectly proportional/ independent of fm. (vii) VSB stands for ____ ______, ______, ______. (viii) Sensitivity of a receiver is (ix) In AM, Ptwax. = Pc/1.5Pc/2Pc. (x) The earliest radio receivers were of the type TRF/Super heterodyne. 5x6=30 Q2. Attempt any five questions: (i) Explain the need for modulation. (ii) Differentiate between narrow band and wide band FM. (iii) Discuss the need for pre-emphasis in FM. (iv) Explain the basic principle of FM detection using single slope detection. (v) Draw and explain the block diagram of a super heterodyne reviver. (vi) Discuss the effect of noise on FM carrier.

- (vii) Explain what you understand by a placed locked loop.
- (viii) Derive the expression for an Am wave.

Section-C

- 03. Attempt any three questions:
 - (i) With the help of a neat diagram explain the principle of working of a ratio detector for FM.
 - (ii) With the help of block diagram explain the working of an Armstrong FM transmitter.
 - (iii) Compare in detail the AM and FM communications system.
 - (iv) Write short notes on any two of the following.
 - (a) AGC-simple and delayed
 - (b) Balanced modulation

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(c) Lining and de-emphasis in FM reception

Max. Marks: 75

10x1.5=15

3x10=30