Code No. 3293

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) II - Semester (Main) Examination, May / June 2017

Subject : Ground Improvement Techniques (Elective-II)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1 The conversion of well graded in situ soil into a poorly graded soil is called "Blending of aggregates". Answer Yes or No and justify your answer. (2)

2 "Higher the volatile content, better is the stabilization in Bitumen stabilization". Answer Yes or No and justify your answer. (2)

3 The preloading technique is a Hydraulic Modification method. Answer Yes or No and Justify your answer. (2)

4 In which condition of the ground, Geo-synthetic drains are preferred. Explain. (2)

5 What is uniaxial geo-grid and bi-axial geo-grid. Explain. (2)

6 What are the parameters to be determined as a part of quality control in stabilization work and state their significance? (3)

7 What is Groutability ratio? For a material having D_{85}=0.12mm to be grouted into a transformation having D_{15}=2.7 mm, find the groutability ratio. (3)

8 What are the characteristics of a good grout Material? Explain. (3)

9 Explain the significance of the "Anchorage Length" in design of reinforced earth retaining structure. (3)

10 What is the primary function of a Geo-Textile used in earthen dams? Explain. (3)

PART – B (50 Marks)

11 (a) Explain the principle and applications of Mechanical Stabilization of soils. (5)
(b) Explain the factors to be considered in Mix design for blending of aggregates in Mechanical Stabilization of soils. (5)

12 (a) Discuss in detail the factors affecting the properties of soil – lime, utilized for stabilization of soils. (5)
(b) Explain the principles and applications of Bituminous materials for stabilization of soils. (5)

13 (a) What is jet grouting? Explain the procedure and its applications. (5)
(b) Explain the cement content requirement for different types of soils for grouting. (5)

14 (a) What is reinforced earth? Explain the mechanism of its action in resisting active earth pressure. (5)
(b) Define and differentiate Geomembranes and Geotextiles, duly explaining their functions and applications. (5)

15 (a) What are the different Thermal and Vacuum methods available for densification of cohesive soils. Explain. (5)
(b) What is Electro Osmosis Method of dewatering? Explain the procedure and its use in detail. (5)

..2

16 (a) What are the elements of reinforced earth wall duly explaining the specification, requirement and functions of each element. (5)

(b) Explain the filtration and drainage functions of Geo-Textiles duly discussing the filter criteria. (5)

17 Write short notes on any **two** of the following: (2x5)

(a) Compaction piles

(b) Stone columns

(c) Curtain grouting

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Code No. 3294

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) II Semester (Main) Examination, May / June 2017

Subject: Advanced Environmental Engineering (Elective – II)

Time: 3 Hours **Max.Marks: 75**

Note: Answer all questions from Part – A and any five questions from Part – B.

PART – A (25 Marks)

1		What is hazardous waste? How do you differentiate it from solid waste?	2
2		Enumerate the methods of treating industrial wastewater.	2
3		Define the term stack sampling.	2
4		State the different means for control of effluent discharges into the atmosphere.	2
5		What are the objectives of Environmental Impact Assessment Process?	2
6		Highlight the factors affecting the self purification of water bodies.	3
7		What are the wastewater characteristics of steel plant industry?	3
8		State the various methods for measurement of Meteorological variables.	3
9		Discuss the basic data required for selection of a particular type of equipment.	3
10		Enumerate the base line data collection required for EIA.	3

PART – B (5x10 = 50 Marks)

11	a)	What are the plans incorporated by the Environmental legislation towards industrial effluents? Discuss in brief.	6
	b)	Explain the effects of industrial wastes on streams.	4
12	a)	Draw the flow chart to show the manufacturing process of Paper and Pulp Industry.	6
	b)	What are the sources and characteristics of wastewater generated from Tanning Industry? Explain.	4
13	a)	Give the detailed classification of Air Pollutants and elaborately explain about on the primary and secondary air pollutants.	4
	b)	State the various difficulties and basic considerations of air sampling.	6
14	a)	Mention the common methods of control of gaseous contaminants and describe any one in detail.	4
	b)	Explain with a neat sketch, the principle, construction and working of an electrostatic precipitation.	6
15	a)	Explain the points to be incorporated in preparation of EIA repot.	4
	b)	How is an EIA prepared regarding the issues related to rehabilitation of affected people? Explain.	6
16	a)	What are the major measures that need to be taken to control air pollution at the source?	5
	b)	Discuss various legal provisions of Environmenal Impact Assessment.	5
17		Write short notes on the following:	
	a)	Air quality standards	4
	b)	Characteristics of effluent from thermal power and cement industries.	6

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Code No. 3295

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) II - Semester (Main & Backlog) Examination, May / June 2017

Subject : Advanced Reinforced Concrete Design (Elective – II)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1 Explain the design principles of curved beams. (3)

2 How the curved beam design is different from other beams? (2)

3 How do you provide the side face reinforcement for deep beams? (3)

4 Differentiate portal method and cantilever method. (3)

5 Define stiffness and distribution factors. (2)

6 Give IS specifications needed for flat slabs. (2)

7 Give any three advantages of flat slabs. (3)

8 Define raft foundation. (2)

9 Under what circumstances piles and pile caps are designed. (3)

10 What do you understand by column grid? (2)

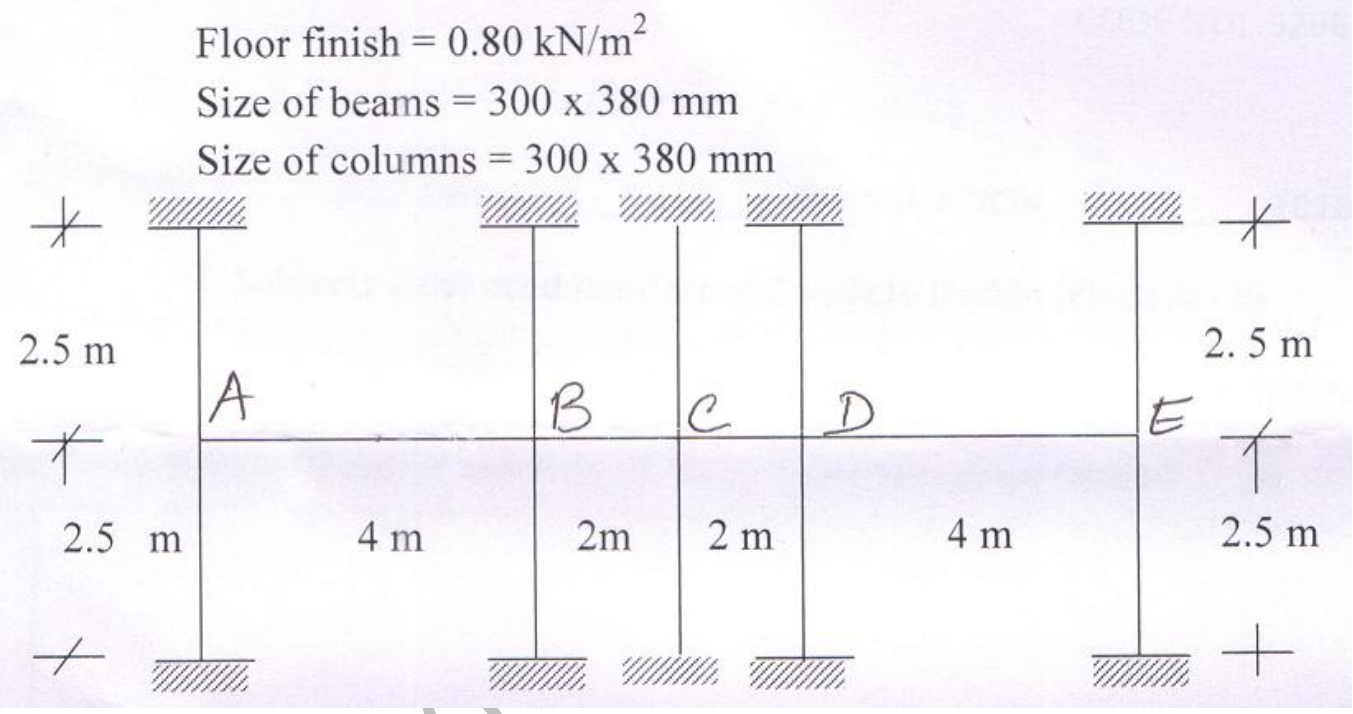
PART – B (50 Marks)

11 Design a circular beam curved in plan for the foundation raft of a water tower which has a mean diameter of 10 m. The uniformly distributed load transmitted by 10 symmetrically placed columns on the beam being 550 kN/m. Width of the beam is 450mm mm and overall depth is 900 mm. Use M 25 grade concrete and fe 500 grade steel. Arrive the suitable reinforcement in the beam and sketch the details of reinforcement K_1=0.0054, 2=0.0023, k3=-.0003, and w=7 deg 30 min. (10)

12 A continuous deep beam spanning over three, equal spans of 10 m each have an overall depth of 6 m. The width of support of 0.9 m and the width of beam = 0.45 m. The beam supports a uniformly distributed live load of 250 kN/m, using M 30 grade concrete and Fe 500 grade steel, design suitable reinforcements for the central span of continuous deep beam. Sketch the details of reinforcement. (10)

..2

13 The substitute frame shown in figure below has to be analyzed for maximum positive and negative movements in the beams AB, BC and CD, and DE. Estimate the maximum moments, in beams and columns. The beams are spaced at 4 m intervals. Thickness of floor = 100 mm (10)



14 Design a interior panel of a flat slab carrying a super imposed load of 4.5 kN/m^2. The weight of the floor finish on the slab may be taken as 1.85 kN/m^2. The panel is supported on 600 mm diameter circular columns. Size of panel is 7 m x 8 m. Use M 30 grade concrete and Fe 415 grade steel. (10)

15 Design a portal frame fixed at the base to suit the following data : (10)
Spacing of the portal frame = 5.0 m
Height of the column = 4.0 m
Distance between the column centres = 8.0 m
Live load on roof = 2.85 kN/m^2
Design the slab and portal frame. Assume suitable data if required

16 Design a pile foundation for a column load of 1800 kN. Length of the pile is 6.0 m. Use M35 grade concrete and Fe 500 grade steel. (10)

17 Design a raft foundation for 12 columns, arranged in two rows, spaced at 5 metres c/c in the longitudinal direction and 4 metres in the transverse direction. The internal columns carry 1600 kN each and end columns carry 1200 kN. The bearing capacity of the soil is 105 kN/sq.m. (10)

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Code No. 3296

FACULTY OF ENGINEERING

B.E. 4/4 (Civil) II - Semester (Main) Examination, May / July 2017

Subject : Advanced Transportation Engineering (Elective – II)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1 Discuss the affect of water retaining agents in soil stabilization. (2)
2 What is the standard thickness of layer and standard weight of rollers used in Mehara's method of soil stabilization? (3)
3 Explain the concept of ESWL using deformation criteria. (2)
4 What do you understand from the group index of soils 10 and 20? (3)
5 Explain impending skidding. (2)
6 List out various types of cross drainage works. (3)
7 Write any one drawback of benefit cost ratio of evaluation of highway project. (3)
8 Explain Life insurance method of accident costing. (2)
9 What are the advantages of one way traffic? (3)
10 Give any two transportation applications in which computers can be applied. (2)

PART – B (50 Marks)

11 (a) Discuss briefly about soil lime stabilization. (5)
(b) Distinguish between soil bitumen and soil bitumen stabilization. (5)

12 (a) What are the major changes and assumptions made in revised CBR method of designing flexible pavements. (5)
(b) Compute the wheel load stresses for the following data: (5)
Pavement thickness = 20cm, Modulous of subgrade reaction = 5.9 kg/cm^3
Poison's ratio = 0.15, Modulous of clasticity of concrete = 3 x 10^5 kg/cm^2
Radius of contact area of wheel load = 18 cm

13 (a) Explain the method of organizing a Benkelman beam test for finding the characteristics deflection. (5)
(b) Explain briefly about the requirements of ideal highway of drainage system. (5)

14 (a) What are the factors influencing Level of service? (5)
(b) What are various causes of highway accidents.? (5)

15 (a) Explain briefly about parking inventories. (5)
(b) What are ill effects of bottle necks in highways? (5)

16 (a) Discuss about various types of restriction on turning movements of traffic. (5)
(b) Explain about tidal flow concepts used in traffic flow operations. (5)

17 Write short notes on any **three** of the following: (10)
(a) Net present value method of project evaluation
(b) Traffic noise influence on environment
(c) Critical combination of stresses in rigid pavements
(d) Triangular method of proportioning soils

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Code No. 3303

FACULTY OF ENGINEERING

B.E. 4/4 (EEE) II-Semester (Main & Backlog) Examination, May / June 2017

Subject : Utilization

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	State and advantages of electric heating.	2
2	Differentiate AC and DC welding.	3
3	Define solid angle and luminous intensity.	2
4	Explain about stroboscopic effect.	3
5	Give a brief note on limit switches.	2
6	Explain about motor protection.	3
7	What are various systems of Electric Traction?	2
8	Define adhesive weight and coefficient of Adhesion.	2
9	What are the advantages of series and parallel control of DC motors?	3
10	Write short notes on the maintenance of lead acid batteries.	3

PART – B (5 x 10 = 50 Marks)

11	a)	The power required for dielectric heating of a slab of resin 150 cm^2 in area and 2 cm thick is 200 W at a frequency of 30 MHz. The material has a relative permittivity of 5 and a PF of 0.05. Determine the voltage necessary and the current flowing through the material.	5
	b)	Describe the working principle of Ajax Wyatt type furnace.	5
12	a)	Explain the following welding process with help of neat schematic diagrams. A) Spot welding B) Projection welding C) Seam welding	6
	b)	Explain street lighting and flood lighting.	4
13	a)	Explain the remote control operation of 3-phase induction motor with help of neat schematic diagram.	5
	b)	Explain the starting of synchronous motor with help of neat schematic diagram.	5
14	a)	Explain the sodium discharge lamp with neat schematic diagrams.	5
	b)	A 100 candle power lamp is hung 3m above the centre of a circular area of 2.5 sq. meters. Determine the illumination at i) the centre of the area, ii) a point on the circumference of the area, iii) average illumination. Find also the average illumination, if a reflector of 55% efficiency is used.	5

..2

15 a) An electric train weighing 500 tonnes climbs up-gradient with G = 8 and with following Speed- time curve :
Uniform acceleration of 2.5 km/hr/sec for 60 seconds
Constant speed for 5 minutes
Coasting for 3 minutes
Dynamic breaking at 3 km./hr/sec to rest.
The train resistance is 25 N/Tonne, rotational inertia effect 10% and combined efficiency of transmission and motor is 80%. Calculate the specific energy consumption. 6

b) Explain the power of traction motors with the help of suitable expressions. 4

16 Write brief note on the following :

a) Charging and rating of batteries 4

b) Shunt bridge transition 6

17 a) Explain about various laws of illumination. 4

b) Explain about two supply sources for 3-phase induction motor with neat schematic power and control circuit. 6

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Code No. 3321

FACULTY OF ENGINEERING

B.E. 4/4 (ECE) II-Semester Examination, May / June 2017

Subject : Design of Fault Tolerant Systems (Elective – II)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1 Relate MTBF and Reliability.
2 Write properties of Boolean differences.
3 Define the terms static and dynamic redundancy.
4 What is Time Redundancy?
5 What is fail soft operation?
6 List out the advantages of self checking circuits.
7 List out the trade-offs in implementing testability at chip level.
8 Show that use of MUX can improve observability during testing.
9 What is a recovery block?
10 Write the design procedure for completely fault-locatable networks for unite functions.

PART – B (50 Marks)

11 a) Explain transition count testing in detail.
b) Determine the tests for checking all single node faults using Boolean difference method for the Boolean function $F = X_1'X_2X_3 + X_1'X_2'X_3$.

12 a) Explain 5 MR reconfiguration scheme in detail.
b) Explain self purging redundancy.

13 Explain a scheme for fault tolerant system design for VLSI chips.

14 Explain a totally self checking checker for Berger codes.

15 a) Explain Reed-Muller expansion technique with a suitable example.
b) Explain briefly about built in test.

16 a) Discuss advantages and disadvantages of TMR.
b) Explain briefly about random testing.

17 Write short notes on any Two :
a) Partition theory
b) Path sensitization
c) Controllability with test points

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Code No. 3322

FACULTY OF ENGINEERING / INFORMATICS

B.E. 4/4 (ECE / AE / CSE / IT) II – Semester (Main & Backlog) Examination, May 2017

Subject: Entrepreneurship
(Elective – II , III, & V)

Time: 3 Hours **Max.Marks: 75**

Note: Answer all questions from Part – A and any five questions from Part – B.

PART – A (25 Marks)

1	Mention the objectives of small scale industry.	2
2	Mention the different forms of enterprises.	3
3	What are the attributes for personality development?	2
4	What do you mean by first generation entrepreneur?	2
5	What is the environmental influence on entrepreneur?	2
6	What is profitability analysis?	2
7	How do you analyse the market for project formulation.	3
8	Explain Float in the project network calculation.	3
9	What are the limitations of bar chart?	3
10	What is the difference between value and attitude?	3

PART – B (5x10 = 50 Marks)

11	What are the major trends effecting the direction of economic growth? How entrepreneurship influences economic growth?	10
12	a) Describe about the status of woman entrepreneurs in India and mention favourable conditions that they have to become entrepreneurs.	5
	b) Explain about first generation entrepreneurs along with their opportunities and challenges.	5
13	Explain various project financing institutions in India.	10
14	What is meant by Project network analysis? Explain the procedural steps for CPM techniques of network analysis.	10
15	What is urgency addiction? Is it good for an entrepreneur? How it influences the market?	10
16	What is motivation? Explain the various models to motivation.	10
17	Describe the Time Management Matrix.	10

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Code No. 3323

FACULTY OF ENGINEERING

B.E. 4/4 (ECE) II-Semester (Main & Backlog) Examination, May / June 2017

Subject : Real Time Operating Systems (Elective – II)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Define Kernel. Mention different types of Kernels.	3
2	Explain any two important reasons for usage of operating system for an electronic system.	2
3	Differentiate between Shortest Jump First (SJF) algorithm and round Robin scheduling algorithm.	3
4	Mention any two notable advantages of Thread Scheduling.	2
5	Define semaphore. When do we recommend using it?	3
6	Mention the solution adopted for dinning philosopher's problem.	2
7	Differentiate First-fit Vs Best-fit memory allocation algorithms.	3
8	Mention different page replacement policies available in RTOS.	2
9	Mention any three notable features of Vxworks RTOS.	3
10	Write any two main aspects of choosing a RTOS for an electronic system design.	2

PART – B (50 Marks)

11	a)	What is Real Time Operating System? Differentiate between General Purpose Operating System and Real Time Operating System.	5
	b)	Describe in brief about the interaction of Operating System with the underlying hardware.	5
12	a)	Differentiate priority and non-priority based scheduling of multi-tasking with a neat timing diagram.	5
	b)	State Shortest Jump First (SJF) algorithm and explain with a neat timing diagram.	5
13	a)	What is deadlock problem? When it will occur? Explain with an example.	5
	b)	Describe in brief about Producer-Consumer problem and strategy being adopted.	5
14	a)	Explain various memory allocation techniques available for tasks in RTOS.	6
	b)	Write in detail about the LRU page replacement policy.	4
15	a)	Explain usage of RTOS for Fault Tolerant Applications with an example.	5
	b)	With the kernel diagram, mention in brief about μC/OS-II RTOS.	5
16	a)	Write short notes on UNIX multilevel feedback scheduling.	5
	b)	Write a short note on FCFS, C-SCAN disk scheduling algorithms.	5
17		Write any Two of the following :	5+5
	a)	Write a short notes on various task states and task state transitions	
	b)	Explain how messages are getting passed among the created tasks in RTOS	
	c)	Write in brief about shared resource problem with an example	

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Code No. 3325

FACULTY OF ENGINEERING

B.E. 4/4 (ECE) II - Semester (Make-up) Examination, May / June 2017

Subject : Wireless Sensor Networks (Elective – II)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1 What are the characteristic requirements for Wireless sensor networks?
2 In what way sensor networks are different from ad-hoc networks?
3 What is the function of actuator in sensor node architecture?
4 What is the common structure of transceiver in sensor node architecture?
5 What are different types of sensors?
6 What do you mean by data-centric network?
7 What are the design issues for a routing protocol of WSNs?
8 What do you mean by clustering in Wireless sensor network?
9 Write short note on Tiny OS.
10 What do you mean by Simulation of a wireless network?

PART – B (50 Marks)

11 (a) Explain in detail about the sensor node architecture.
(b) Explain in detail about any two applications of sensor networks.

12 (a) Explain different physical layer design considerations in WSNs.
(b) Explain the difference between Zigbee and Bluetooth networks.

13 Explain in detail about any two routing protocols for WSNs.

14 (a) Explain the requirements and design constraints for Wireless MAC protocols.
(b) Explain Low duty cycle protocols.

15 Explain sparse topology and energy management protocol.

16 (a) Explain the importance of Localization and Positioning procedures in WSNs.
(b) What are the different aspects of topology control algorithms?

17 (a) Write about TOSSIM simulator.
(b) Write short notes on Berkeley motes

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Code No. 3326

FACULTY OF ENGINEERING

B.E. 4/4 (ECE) II - Semester (Make-up) Examination, May / June 2017

Subject : Speech Processing (Elective – II)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1 Lit the various Articulatory organs of Humans.
2 Differentiate Vowels and Semivowels.
3 What are the advantages of Linear predictive analysis?
4 Define : Cepstrum, Liftering, Quefrency, with respect to Homomorphic speech processing.
5 What is the significance of short-time speech processing?
6 Give approximates ranges of pitch for men, women and children.
7 Explain the term co-articulation and its significance.
8 Compare HMM and DTW.
9 What are the advantages of Vector quartirer codes?
10 What are the challenges of ASR?

PART – B (50 Marks)

11 (a) Explain source filter model of speech production.
(b) Explain any one method of estimation of Linear-prediction coefficients.

12 (a) Explain with a neat block diagram ADPCM.
(b) Explain Cepstral Analysis in detail.

13 (a) What is Pitch synchronous analysis, what are its advantages?
(b) Explain Rabiner-Gold pitch extraction algorithm.

14 (a) Explain Articulatory speech synthesis.
(b) Explain Text-to-speech conversion.

15 (a) Explain the difference between sub-band coding and transform coding.
(b) What are channel Vocoders?

16 (a) Explain HMM based ASR system for isolated word recognition.
(b) Explain Dynamic Time Warping.

17 Write short notes on any **two** of the following:
(a) Automatic speech recognition
(b) Format Tracking
(c) Autocorrelation in speech processing

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Code No. 3368

FACULTY OF ENGINEERING

B.E. 4/4 (AE) II - Semester (Main) Examination, May / June 2017

Subject : Earth Moving Vehicle

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1 Define Boom
2 Explain the front attachment of Shovel
3 What are the actions involved on blade of scrape?
4 List out the important parts of hydraulic Dozer.
5 What is motor grader?
6 List out applications of the tractors.
7 Define Luffing
8 What is PTO Shaft?
9 What are the main difference between shovel and Ditcher?
10 What are the advantages of the Scraper?

PART – B (50 Marks)

11 Explain in detail “multi axle transmission system” with neat sketch.

12 Write give brief note on dumper with neat sketch.

13 What are the different tract are used in earthmovers? And explain briefly any one, with neat sketch.

14 Give short notes on following:
(a) Single bucket loader
(b) Multi bucker loader

15 Draw the line diagram of dragline and explain about the its walking mechanism.

16 List out the hoisting equipment, and explain briefly any one, with neat sketch.

17 Explain in detail “hydraulic dozer” with neat sketch.

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Code No. 3370

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (Main & Backlog) Examination, May / June 2017

Subject: Software Quality and Testing (Elective – II)

Time: 3 Hours **Max.Marks: 75**

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

1	Define software quality assurance.	2
2	How quality control can be done in any software organization?	3
3	What is function point how it is advantageous than LOC?	2
4	What are the steps involved for software quality metrics methodology?	3
5	Distinguish functional and structural testing.	2
6	List out the test factors.	2
7	Distinguish white box testing and black box testing.	2
8	Explain cause effect graphing.	3
9	Write short notes on testing security.	3
10	Discuss about auditing, inspections and reviews.	3

PART – B (5x10 = 50 Marks)

11	a)	Explain in detail about software configuration management.	5
	b)	Name the sections of SQA plan. What are the steps to develop and implement a SQA plan?	5
12		What is the need of software quality metrics? Explain in-process quality metrics.	10
13		Discuss about the eight considerations in developing testing methodologies.	10
14		Explain the methodology to evaluate automated testing tools.	10
15		What is V-testing? Explain the work bench used to test a data warehouse application.	10
16	a)	Explain eleven steps of testing process.	5
	b)	Discuss win runner testing tool.	5
17		Write short notes on the following:	
	a)	Testing tactics check list	3
	b)	CRUD	3
	c)	JUNIT	4

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Code No. 3372

FACULTY OF ENGINEERING / INFORMATICS

B.E. 4/4 (CSE / IT) II – Semester (Main) Examination, May / June 2017

Subject: Human Computer Interaction (Elective – II & V)

Time: 3 Hours **Max.Marks: 75**

Note: Answer all questions from Part A and any five questions from Part B.

PART – A (25 Marks)

1	How networks facilitate collaborative activities.	3
2	What is Gulf of Execution and Gulf of Evaluation?	2
3	List out the elements that appear in many of the standard models.	3
4	What are the stake holders identified in discovery of projects.	2
5	Explain 80 / 20 Rule.	2
6	Define Fitt's Law and explain its parts to Fitt's Law.	3
7	Differentiate between Model & Modeless dialogues.	3
8	Why the perceived Color of an object is affected by the Color of its background.	3
9	What are the features added to the standard RSVP format.	2
10	Explain psychological aspects of perception.	2

PART – B (5x10 = 50 Marks)

11	a)	Explain different Computing Environments used in interaction design.	5
	b)	Explain applications of natural language interaction.	5
12	a)	What is Elicitation. Explain direct methods of elicitation.	5
	b)	What is Evaluation? Explain different types of evaluation.	5
13	a)	Explain Keyboard Level Model. What is that the Keyboard Level Model doesn't model.	5
	b)	What are the activities involved in test preparation .Explain.	5
14	a)	Explain about Menu Accelerators and Menu Bars.	6
	b)	Explain Web-Based Color.	4
15	a)	What are Earcons. Explain musical parameters of Earcons.	5
	b)	Explain how Haptic Stimuli can be used to represent data.	5
16		Design principles can be used to guide design decisions, explain by following principles of interaction design.	10
17		What are Color Systems? Explain how you define Color as the combined effects of hue, saturation and brightness.	10

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Code No. 3373

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (Main & Backlog) Examination, May / June 2017

Subject: Software Reuse Techniques (Elective – II)

Time: 3 Hours **Max.Marks: 75**

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

1	Write how Facades control access component system internals.	3
2	What are the consequences of Prototype and Builder patterns?	3
3	Write the intent of singleton and proxy patterns.	3
4	Write the structure and participants of Adapter pattern.	3
5	Draw the structure of forwarder – receiver pattern. Mention the participants in forwarder – receiver pattern.	2
6	What are the common uses of model-view-controller architectural pattern?	2
7	Write a short note on testing the component system.	2
8	Write the intent and context of broker pattern.	2
9	Write any two known uses of Presentation Abstraction-Control pattern.	3
10	Write the applications of strategy pattern.	2

PART – B (5x10 = 50 Marks)

11	a)	Describe how to specialize some components before reuse.	5
	b)	Explain the intent, structure consequences and participants of the Decorator patterns.	5
12	a)	Explain different concurrent process involved in software reuse.	5
	b)	Define a design pattern and explain its essential elements.	5
13		Explain in detail about the motivation and implementation of interpreter pattern.	10
14		Describe in detail about template pattern.	10
15		Describe in detail about the flyweight pattern.	10
16		Write the intent, motivation, structure and known uses of the following patterns:	
	a)	Whole-part	5
	b)	Publisher-subscriber	5
17		Write short notes on:	
	a)	Architectural patterns	5
	b)	Behavioral patterns.	5

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Code No. 3389

FACULTY OF INFORMATICS

B.E. 4/4 (I.T.) II - Semester (Main) Examination, May / June 2017

Subject : Software Project Management (Elective – V)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

1) Specify five necessary improvements for basic approach of waterfall model. (2)
2) What are the basic parameters in which software cost models can be abstracted? (3)
3) What are different stages of life-cycle? Differentiate them? (3)
4) What is WBS? What is it's significance in software Project ? (2)
5) Differentiate Roundtrip engineering and Forward engineering (2)
6) What is an artifact? What are various engineering artifacts? (3)
7) How are software projects different from general projects of other branches of engineering? (2)
8) Define process automation. What are its advantages in software projects. (3)
9) Briefly discuss importance of teamwork among various stakeholders (2)
10) What are the various choices available for handling risk to software project management? (3)

Part-B (50 Marks)

11 a) What measures are to be taken for Ensuring quality in software project? (5)
b) Explain process of cost and schedule estimations for iterative process. (5)

12 a) What are the attributes of good cost estimation of software project? (5)
b) Discuss basic parameters of software cost model. (5)

13 a) Explain briefly modern software management principles. (5)
b) Discuss and compare various activities performed in different phases of life-cycle of software project. (5)

14 a) What are different perspectives of Software Project plan (5)
b) What are the various organizational structures used during software project implementation? (5)

15 What is CASE? Explain How software Project process is automated by using CASE. (10)

16 a) Discuss software management best practices in modern project profile. (5)
b) How next generation software cost models defer from conventional software cost models (5)

17 a) Write briefly about Philippe Kruchten's concepts of software architecture. (5)
b) Explain briefly key principles of software process workflows. (5)

11. Write short notes on : (3+3+4)
a) Top-down approach
b) Bottom-up approach
c) Iteration in software process

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