Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH/EIGHTH SEMESTER B. ARCH. DEGREE EXAMINATION – NOVEMBER 2018

SUBJECT: ARC-14-307: PROJECT MANAGEMENT (2014 SCHEME)
ARC 406.2 : PROJECT MANAGEMENT & VALUATION (2010 SCHEME)

Monday, November 05, 2018

Time: 14:00 – 17:00 Hrs. Max. Marks: 50

- **Answer any FIVE full questions.**
- **Any missing data can be suitably assumed.**

1A. Explain the following Scheduling methods (support with examples):
i) Bar Charts ii) Milestone charts

1B. Who are Project Stakeholders?

1C. Explain Network Analysis with the help of a Network Diagram.

(4+2+4 = 10 marks)

2A. Explain what Project Integration management is?

2B. What are the Objectives of Project Planning?

2C. What does the Initiation Phase in a construction Project include?

(2½+5+2½ = 10 marks)

3A. Explain the following terms:
i) Latest allowable occurrence time ii) Earliest expected time
iii) Slack iv) Critical path

3B. Differentiate between AOA and AON networks.

3C. A construction project consists of 12 activities. The predecessor relationships are identified by their node numbers as indicated in the table below. Draw the network diagram.

Activity	Identification	Activity	Identification
P	(1,2)	U	(4,5)
Q	(2,3)	V	(4,7)
R	(2,4)	W	(5,8)
S	(3,6)	X	(6,8)
T	(3,5)	Y	(7,8)

(4+2+4 = 10 marks)

4. A maintenance project consists of the following 10 activities, whose precedence relationships are identified by their node numbers.

Activity	Alternative (Initial node, Final node)	Estimated duration (days)
A	(1,2)	2
B	(2,3)	3
C	(2,4)	5
D	(3,5)	4
E	(3,6)	1
F	(4,6)	6
G	(4,7)	2
H	(5,8)	8
I	(6,8)	7
J	(7,8)	4

a) Draw a network for the project.

b) Calculate earliest time and latest activity times for each activity.

c) Calculate the slack for each activity.

d) Which activities are critical?

(3+3+3+1 = 10 marks)

5A. Explain precedence network. How do they differ from Activity on Arrow diagrams?

5B. What is project closure in project management?

5C. Explain in brief cost control.

(3+4+3 = 10 marks)

6A. Draw the A-O-N network diagram for the project activities given below. Calculate the earliest and latest activity times. Determine the critical path and total project duration.

Activity	Identification	Duration
A	1 – 2	5
B	1 – 6	6
C	2 – 3	3
D	2 – 4	4
E	3 – 5	2
F	4 – 5	3
G	6 – 7	5
H	7 – 8	2
I	5 – 8	5

6B. Explain the normal duration and crash duration.

(8+2 = 10 marks)