Seat	
No.	

Set P

 $(1\times14=14)$ 

# F.E. (Part – II) (Old – CGPA Pattern) Examination, 2018 BASIC CIVIL ENGINEERING

Dav	and Date: Tuesda	av. 20-11-2018	Max. Marks: 70

Time: 10.00 a.m. to 1.00 p.m.

Instructions: 1) Assume suitable data if necessary and state it clearly.

- 2) Q. No. 1 is compulsory. It should be solved in first 30 minutes in Answer Book Page No. 3. Each question carries one mark.
- 3) Answer MCQ/Objective type questions on Page No. 3 only. Don't forget to mention, Q.P. Set (P/Q/R/S) on Top of Page.

### **MCQ/Objective Type Questions**

Duration: 30 Minutes	Marks: 1		

- Choose the correct alternative :
  - Contour lines are widely spaced in case of
     a) Steep slope ground
     b) Ge

b) Gentle slope ground

c) Undulated ground

- d) None of the above
- 2) Following is the sub branch of Civil Engineering deals with air pollution and water supply
  - a) Geotechnical Engineering

b) Environmental Engineering

c) Transporation Engineering

- d) Structural Engineering
- 3) The useful storage is the volume of the water stored in reservoir between
  - a) Minimum pool level to maximum pool level
  - b) Minimum pool level to normal pool level
  - c) Normal pool level to maximum pool level
  - d) River bed and minimum pool level
- 4) As per IRC recommendation, maximum limit of super elevation for mixed traffic in plain terrain is
  - a) 1 in 15
- b) 1 in 10
- c) 1 in 12.5
- d) 1 in 20
- 5) Following angles can be set by open cross staff
  - a) only 45°

b) only 90°

c) either  $45^{\circ}$  or  $90^{\circ}$ 

d) any angle

P.T.O.

6)	In whole circle bear	ing, a quadrantal	bea	aring N66°30'V	V e	xpressed as
	a) 295°30′	b) 293°30′	c)	290°30′	d)	294°30′
7)	The roads are class	sified as per				
	a) road material	b) road width	c)	road location	d)	all of these
8)	A combined footing	is commonly use	d			
	a) When two colum	nns are spaced clo	ose	to each other		
	b) When two colum	nns are spaced fai	r ap	art		
	c) Under a set of co	olumns				
	d) Under a set of w	alls				
9)	The lowest part of a	structure which t	ran	smits the load	to	the soil is known as
	a) super-structure	b) plinth	c)	foundation	d)	basement
10)	In earthquake resist a) Continuous band b) Use of rich morta c) Use of through h d) All the above	d at plinth, lintel ar ar		•	<b>)</b>	
11)	Arrangement of doc reveal desirable vie					•
	a) Aspect	b) Prospect	c)	Ventilation	d)	Privacy
12)	A good building stor	ne should have				
	a) strength		b)	hardness and	l to	ughness
	c) resistance to fire	•	d)	all of the above	/e	
13)	Initial setting time of	f cement concrete	sh	ould not be le	ss t	han
	a) 30 min	b) 120 min	c)	180 min	d)	360 min
14)	Objectives of GIS a	re				
	a) Maximize the efi	ciency of decision	n ma	aking and plar	nin	g
	b) Provide efficient	means for data d	istri	bution and ha	ndli	ing
	c) To work from pa	rt to whole				
	d) Only a) and b)					



Seat	
No.	

Day and Date: Tuesday, 20-11-2018 Marks: 56

Time: 10.00 a.m. to 1.00 p.m.

Instructions: 1) Question No. 2 is compulsory in Section – I and solve any two questions from Q. No. 3 to Q. No. 5.

- 2) Q. 6 from Section II is compulsory and solve any two questions out of Q. No. 7 to Q. No. 9.
- 3) Assume suitable data if necessary and state it clearly.

#### SECTION - I

2. a) Explain the role of Civil Engineer in construction activity.

3

b) The following bearings were taken during closed traverse

Line	Fore Bearing	Back Bearing
AB	66°15′	244°0′
ВС	129°45′	313°0′
CD	218°30′	37°30′
DA	306°45′	126°45′

Find included angles and find out corrected FB and BB.

Draw neat sketch of the traverse. Find included angles and find out corrected FB and BB.

7

2

- 3. a) Write the difference between prismatic compass and surveyors compass.
  - b) The following readings were taken with dumpy level.

1.305 (staff inverted), 1.705, 1.235, 3.925, 2.590, 1.890, 1.785, 2.390, 1.700, 0.300, 1.890 and 3.000

The instrument was shifted after third, sixth and ninth reading. The first reading was taken on BM of elevation 270.275. Find elevation of all points. Apply usual check. Use HI method.

4.	a)	Explain in brief:	
		1) Gravity dam	
		2) Earthen dam.	4
	b)	The chain was tested before starting of the work and found exactly 20 m. At the end of the survey chain was found to measure 20.15m. The area of plan drawn to a scale 1 cm = $50$ m was $120$ sq. cm. Find the true area.	5
5.	a)	Explain the different modes of transportation.	4
	b)	Explain the general principles of surveying.	5
		SECTION - II	
6.	a)	Enlist different principles of planning.	3
	b)	Explain various elements of building with the help of suitable sectional elevation.	7
7.	a)	Define F.S.I and explain its importance in construction.	3
	b)	What is Water Cement ratio? How it affects on strength of concrete?	6
8.	a)	Differentiate between load bearing and framed structures.	3
	b)	Enlist building bye-laws and explain building bye-laws in accordance with building line and space requirement.	6
9.	a)	What are the characteristics of good bricks?	3
	b)	Explain advantages of Green buildings.	6


Seat	
No.	

### F.E. (Part – II) (Old – CGPA Pattern) Examination, 2018 **BASIC CIVIL ENGINEERING**

Max. Marks: 70 Day and Date: Tuesday, 20-11-2018

Time: 10.00 a.m. to 1.00 p.m.

- **Instructions**: 1) **Assume** suitable data **if necessary** and state it clearly.
  - 2) Q. No. 1 is compulsory. It should be solved in first 30 minutes in Answer Book Page No. 3. Each guestion carries one mark.
  - 3) Answer MCQ/Objective type questions on Page No. 3 only. Don't forget to mention, Q.P. Set (P/Q/R/S) on Top of Page.

### MCQ/Objective Type Questions

**Duration: 30 Minutes** Marks: 14

1. Choose the correct alternative:

 $(1\times14=14)$ 

- 1) A combined footing is commonly used
  - a) When two columns are spaced close to each other
  - b) When two columns are spaced far apart
  - c) Under a set of columns
  - d) Under a set of walls
- 2) The lowest part of a structure which transmits the load to the soil is known as
  - a) super-structure b) plinth
- c) foundation
- d) basement
- 3) In earthquake resistant structure, following is desirable
  - a) Continuous band at plinth, lintel and Sill
  - b) Use of rich mortar
  - c) Use of through headers
  - d) All the above
- 4) Arrangement of doors and windows on external walls of a building to reveal desirable view and conceal undesirable views is called
  - a) Aspect
- b) Prospect
- c) Ventilation d) Privacy



5)	A good building stor	ne should have			
	a) strength		b)	hardness and	toughness
	c) resistance to fire		d)	all of the above	/e
6)	Initial setting time of	cement concrete	sh	ould not be les	ss than
	a) 30 min	b) 120 min	c)	180 min	d) 360 min
7)	Objectives of GIS a	re			
	a) Maximize the effe	ciency of decision	m	aking and plan	ning
	b) Provide efficient	means for data d	istr	bution and har	ndling
	c) To work from par	rt to whole			
	d) Only a) and b)				
8)	Contour lines are wi				
	a) Steep slope group		,	Gentle slope	•
0)	c) Undulated groun		•	None of the a	
9)	Following is the sub and water supply	branch of Civil E	ngı	neering deals	with air pollution
	a) Geotechnical En	gineering	b)	Environmenta	l Engineering
	c) Transporation Er	ngineering	d)	Structural Eng	gineering
10)	The useful storage i				reservoir between
	a) Minimum pool le	•			
	<ul><li>b) Minimum pool le</li><li>c) Normal pool leve</li></ul>				
	d) River bed and m	•			
11)	As per IRC recomm	endation, maximu	ım	limit of super e	elevation for mixed
	traffic in plain terrair				
	a) 1 in 15	,	,		d) 1 in 20
12)	Following angles ca	n be set by open			
	a) only 45°		,	only 90°	
	c) either 45° or 90°		,	any angle	
13)	In whole circle beari				
	a) 295°30′	b) 293°30′	c)	290°30′	d) 294°30′
14)	The roads are class	•			
	a) road material	b) road width	c)	road location	d) all of these



Seat	
No.	

Day and Date: Tuesday, 20-11-2018 Marks: 56

Time: 10.00 a.m. to 1.00 p.m.

Instructions: 1) Question No. 2 is compulsory in Section – I and solve any two questions from Q. No. 3 to Q. No. 5.

- 2) Q. 6 from Section II is compulsory and solve any two questions out of Q. No. 7 to Q. No. 9.
- 3) Assume suitable data if necessary and state it clearly.

#### SECTION - I

2. a) Explain the role of Civil Engineer in construction activity.

3

b) The following bearings were taken during closed traverse

Line	Fore Bearing	<b>Back Bearing</b>			
AB	66°15′	244°0′			
ВС	129°45′	313°0′			
CD	218°30′	37°30′			
DA	306°45′	126°45′			

Find included angles and find out corrected FB and BB.

Draw neat sketch of the traverse. Find included angles and find out corrected FB and BB.

7

2

- 3. a) Write the difference between prismatic compass and surveyors compass.
  - b) The following readings were taken with dumpy level.

1.305 (staff inverted), 1.705, 1.235, 3.925, 2.590, 1.890, 1.785, 2.390, 1.700, 0.300, 1.890 and 3.000

The instrument was shifted after third, sixth and ninth reading. The first reading was taken on BM of elevation 270.275. Find elevation of all points. Apply usual check. Use HI method.

	_
	4
and found exactly 20 m. sure 20.15m. The area . cm. Find the true area.	5
	4
	5
	3
of suitable sectional	7
ction.	3
trength of concrete?	6
ructures.	3
laws in accordance with	6
	3
	6

Seat	
No.	

### F.E. (Part – II) (Old – CGPA Pattern) Examination, 2018 BASIC CIVIL ENGINEERING

Max. Marks: 70 Day and Date: Tuesday, 20-11-2018

Time: 10.00 a.m. to 1.00 p.m.

**Instructions**: 1) **Assume** suitable data **if necessary** and state it clearly.

- 2) Q. No. 1 is compulsory. It should be solved in first 30 minutes in Answer Book Page No. 3. Each guestion carries **one** mark.
- 3) Answer MCQ/Objective type questions on Page No. 3 only. Don't forget to mention, Q.P. Set (P/Q/R/S) on Top of Page.

### MCQ/Objective Type Questions

Dur	ration: 30 Minutes	Marks: 14
1.	Choose the correct alternative :	(1×14=14)
	1) Following angles can be set by open gross staff	

- Following angles can be set by open cross staff
  - a) only 45°

b) only 90°

c) either 45° or 90°

- d) any angle
- 2) In whole circle bearing, a quadrantal bearing N66°30'W expressed as
  - a) 295°30′
- b) 293°30′
- c) 290°30′
- d) 294°30′

- 3) The roads are classified as per
  - a) road material
- b) road width
- c) road location d) all of these
- 4) A combined footing is commonly used
  - a) When two columns are spaced close to each other
  - b) When two columns are spaced far apart
  - c) Under a set of columns
  - d) Under a set of walls
- 5) The lowest part of a structure which transmits the load to the soil is known as
  - a) super-structure b) plinth
- c) foundation
- d) basement



6)	In earthquake resistant structure, following is desirable  a) Continuous band at plinth, lintel and Sill  b) Use of rich mortar				
	c) Use of through headed) All the above	ers			
7)	Arrangement of doors and windows on external walls of a building to reveal desirable view and conceal undesirable views is called				•
	a) Aspect b) F	Prospect	c)	Ventilation	d) Privacy
8)	A good building stone sh	ould have			
	a) strength		b)	hardness and	d toughness
	c) resistance to fire		d)	all of the abo	ve
9)	Initial setting time of cem	nent concrete	sh	ould not be le	ss than
	a) 30 min b) 1	20 min	c)	180 min	d) 360 min
10)	Objectives of GIS are				
	a) Maximize the eficience	cy of decision	ma	aking and plar	nning
	b) Provide efficient mea	ns for data di	stri	bution and ha	ındling
	c) To work from part to	whole			
	d) Only a) and b)				
11)	1) Contour lines are widely spaced in case of				
	a) Steep slope ground			Gentle slope	
10\	c) Undulated ground		•	None of the a	
12)	Following is the sub brar and water supply	ICH OF CIVILE	ıgıı	leening deals	with air politition
	a) Geotechnical Engine	ering	b)	Environmenta	al Engineering
	c) Transporation Engine	eering	d)	Structural En	gineering
13)	3) The useful storage is the volume of the water stored in reservoir between a) Minimum pool level to maximum pool level				n reservoir between
	b) Minimum pool level to	o normal pool	le	/el	
	c) Normal pool level to r	-		evel	
4.4	d) River bed and minimum pool level				
14)	<ol> <li>As per IRC recommendation, maximum limit of super elevation for mixed traffic in plain terrain is</li> </ol>			elevation for mixed	
		in 10	c)	1 in 12.5	d) 1 in 20



Seat	
No.	

Day and Date: Tuesday, 20-11-2018 Marks: 56

Time: 10.00 a.m. to 1.00 p.m.

Instructions: 1) Question No. 2 is compulsory in Section - I and solve any two questions from Q. No. 3 to Q. No. 5.

- 2) Q. 6 from Section II is compulsory and solve any two questions out of Q. No. 7 to Q. No. 9.
- 3) Assume suitable data if necessary and state it clearly.

#### SECTION - I

2. a) Explain the role of Civil Engineer in construction activity.

3

b) The following bearings were taken during closed traverse

Line	Fore Bearing	Back Bearing		
AB	66°15′	244°0′		
ВС	129°45′	313°0′		
CD	218°30′	37°30′		
DA	306°45′	126°45′		

Find included angles and find out corrected FB and BB.

Draw neat sketch of the traverse. Find included angles and find out corrected FB and BB.

7

2

- 3. a) Write the difference between prismatic compass and surveyors compass.
  - b) The following readings were taken with dumpy level.

1.305 (staff inverted), 1.705, 1.235, 3.925, 2.590, 1.890, 1.785, 2.390, 1.700, 0.300, 1.890 and 3.000

The instrument was shifted after third, sixth and ninth reading. The first reading was taken on BM of elevation 270.275. Find elevation of all points. Apply usual check. Use HI method.

4.	a)	Explain in brief :	
		1) Gravity dam	
		2) Earthen dam.	4
	b)	The chain was tested before starting of the work and found exactly 20 m. At the end of the survey chain was found to measure 20.15m. The area of plan drawn to a scale 1 cm = $50$ m was $120$ sq. cm. Find the true area.	5
5.	a)	Explain the different modes of transportation.	4
	b)	Explain the general principles of surveying.	5
		SECTION - II	
6.	a)	Enlist different principles of planning.	3
	b)	Explain various elements of building with the help of suitable sectional elevation.	7
7.	a)	Define F.S.I and explain its importance in construction.	3
	b)	What is Water Cement ratio? How it affects on strength of concrete?	6
8.	a)	Differentiate between load bearing and framed structures.	3
	b)	Enlist building bye-laws and explain building bye-laws in accordance with building line and space requirement.	6
9.	a)	What are the characteristics of good bricks?	3
	b)	Explain advantages of Green buildings.	6



Seat	
No.	

Set S

# F.E. (Part – II) (Old – CGPA Pattern) Examination, 2018 BASIC CIVIL ENGINEERING

Day and Date: Tuesday, 20-11-2018 Max. Marks: 70

Time: 10.00 a.m. to 1.00 p.m.

Instructions: 1) Assume suitable data if necessary and state it clearly.

- 2) Q. No. 1 is **compulsory**. It should be solved in **first**30 minutes in Answer Book Page No. 3. Each question carries **one** mark.
- 3) Answer MCQ/Objective type questions on Page No. 3 only. Don't forget to mention, Q.P. Set (P/Q/R/S) on Top of Page.

### MCQ/Objective Type Questions

Dur	ration : 30 Minutes	Marks: 14
1.	Choose the correct alternative :	(1×14=14)

- 1) In earthquake resistant structure, following is desirable
  - a) Continuous band at plinth, lintel and Sill
  - b) Use of rich mortar
  - c) Use of through headers
  - d) All the above
- 2) Arrangement of doors and windows on external walls of a building to reveal desirable view and conceal undesirable views is called
  - a) Aspect
- b) Prospect
- c) Ventilation
- d) Privacy

- 3) A good building stone should have
  - a) strength

b) hardness and toughness

c) resistance to fire

- d) all of the above
- 4) Initial setting time of cement concrete should not be less than
  - a) 30 min
- b) 120 min
- c) 180 min
- d) 360 min

- 5) Objectives of GIS are
  - a) Maximize the eficiency of decision making and planning
  - b) Provide efficient means for data distribution and handling
  - c) To work from part to whole
  - d) Only a) and b)

P.T.O.

6)	Contour lines are widely spaced in case of						
	a) Steep slope grou	nd	b)	Gentle slope	gro	und	
	c) Undulated ground	b	d)	None of the a	bον	/e	
7)	Following is the sub branch of Civil Engineering deals with air pollution and water supply				n air pollution		
	<ul><li>a) Geotechnical Engineering</li><li>c) Transporation Engineering</li></ul>		,	b) Environmental Engineering d) Structural Engineering			
8)	The useful storage is a) Minimum pool leve b) Minimum pool leve c) Normal pool leve d) River bed and mi	rel to maximum p rel to normal pool I to maximum poo	ool He ol le	level vel	res	servoir between	
9)	As per IRC recomme traffic in plain terrain	is		·			
	•	,	,	1 in 12.5	a)	1 in 20	
10)	Following angles car	n be set by open	cro	ss staff			
	a) only 45°		b)	only 90°			
	c) either 45° or 90°		d)	any angle			
11)	In whole circle bearing	ng, a quadrantal l	bea	aring N66°30'V	V e	xpressed as	
	a) 295°30′	b) 293°30′	c)	290°30′	d)	294°30′	
12)	The roads are classi	fied as per					
	a) road material	b) road width	c)	road location	d)	all of these	
13)	A combined footing i	is commonly used	d				
	a) When two column	ns are spaced clo	se	to each other			
	b) When two columi	ns are spaced far	ap	art			
	c) Under a set of co	lumns					
	d) Under a set of wa	alls					
14)	The lowest part of a	structure which to	ran	smits the load	to	the soil is known as	
•	a) super-structure			foundation		basement	



Seat	
No.	

Day and Date: Tuesday, 20-11-2018 Marks: 56

Time: 10.00 a.m. to 1.00 p.m.

Instructions: 1) Question No. 2 is compulsory in Section – I and solve any two questions from Q. No. 3 to Q. No. 5.

- 2) Q. 6 from Section II is compulsory and solve any two questions out of Q. No. 7 to Q. No. 9.
- 3) Assume suitable data if necessary and state it clearly.

#### SECTION - I

2. a) Explain the role of Civil Engineer in construction activity.

3

b) The following bearings were taken during closed traverse

Line	Fore Bearing	Back Bearing	
AB	66°15′	244°0′	
ВС	129°45′	313°0′	
CD	218°30′	37°30′	
DA	306°45′	126°45′	

Find included angles and find out corrected FB and BB.

Draw neat sketch of the traverse. Find included angles and find out corrected FB and BB.

7

2

- 3. a) Write the difference between prismatic compass and surveyors compass.
  - b) The following readings were taken with dumpy level.

1.305 (staff inverted), 1.705, 1.235, 3.925, 2.590, 1.890, 1.785, 2.390, 1.700, 0.300, 1.890 and 3.000

The instrument was shifted after third, sixth and ninth reading. The first reading was taken on BM of elevation 270.275. Find elevation of all points. Apply usual check. Use HI method.

	<ol> <li>Gravity dam</li> <li>Earthen dam.</li> </ol>			
	2) Earthen dam.	_		
h)	,	4		
υ,	The chain was tested before starting of the work and found exactly 20 m. At the end of the survey chain was found to measure 20.15m. The area of plan drawn to a scale 1 cm = 50 m was 120 sq. cm. Find the true area.	5		
a)	Explain the different modes of transportation.	4		
b)	Explain the general principles of surveying.	5		
SECTION - II				
a)	Enlist different principles of planning.	3		
b)	Explain various elements of building with the help of suitable sectional elevation.	7		
a)	Define F.S.I and explain its importance in construction.	3		
b)	What is Water Cement ratio? How it affects on strength of concrete?	6		
a)	Differentiate between load bearing and framed structures.	3		
b)	Enlist building bye-laws and explain building bye-laws in accordance with building line and space requirement.	6		
a)	What are the characteristics of good bricks?	3		
h)	Explain advantages of Green buildings.	6		
k k	a) a) a) c) a) c)	Explain the different modes of transportation.  Explain the general principles of surveying.  SECTION – II  Enlist different principles of planning.  Explain various elements of building with the help of suitable sectional elevation.  Define F.S.I and explain its importance in construction.  What is Water Cement ratio? How it affects on strength of concrete?  Differentiate between load bearing and framed structures.  Enlist building bye-laws and explain building bye-laws in accordance with		