Seat
No.

Set **P**

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

Duration : 30 Minutes   Marks : 14

1. Choose the correct alternative :   **(1×14=14)**

  1) Contour lines are widely spaced in case of
    a) Steep slope ground   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° or 90°   d) any angle

P.T.O.

6) In whole circle bearing, a quadrantal bearing N66°30'W expressed as

   a) 295°30'   b) 293°30'   c) 290°30'   d) 294°30'

7) The roads are classified as per

   a) road material   b) road width   c) road location   d) all of these

8) 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

9) 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

10) 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

11) 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

12) A good building stone should have

   a) strength   b) hardness and toughness

   c) resistance to fire   d) all of the above

13) Initial setting time of cement concrete should not be less than

   a) 30 min   b) 120 min   c) 180 min   d) 360 min

14) 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)

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Set P

SLR-TX – 18

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

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′
BC	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**

3. a) Write the difference between prismatic compass and surveyors compass.   **2**

   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.   **7**

Set P

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**

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Set P

Seat No.

Set Q

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

Day and Date : Tuesday, 20-11-2018
Time : 10.00 a.m. to 1.00 p.m.

Max. Marks : 70

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 : 14

1. Choose the correct alternative : **(1×14=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

P.T.O.

5) A good building stone should have
   a) strength
   b) hardness and toughness
   c) resistance to fire
   d) all of the above

6) Initial setting time of cement concrete should not be less than
   a) 30 min
   b) 120 min
   c) 180 min
   d) 360 min

7) 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)

8) Contour lines are widely spaced in case of
   a) Steep slope ground
   b) Gentle slope ground
   c) Undulated ground
   d) None of the above

9) 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

10) 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

11) 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

12) Following angles can be set by open cross staff
    a) only 45°
    b) only 90°
    c) either 45° or 90°
    d) any angle

13) In whole circle bearing, a quadrantal bearing N66°30'W expressed as
    a) 295°30'
    b) 293°30'
    c) 290°30'
    d) 294°30'

14) The roads are classified as per
    a) road material
    b) road width
    c) road location
    d) all of these

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Set Q

Seat No.

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

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′
BC	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**

3. a) Write the difference between prismatic compass and surveyors compass.   **2**

   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.   **7**

Set Q

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**

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Set Q

Seat
No.

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

Duration : 30 Minutes — Marks : 14

1. Choose the correct alternative : **(1×14=14)**

   1) 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

P.T.O.

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 headers
   d) All the above

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) Prospect   c) Ventilation   d) Privacy

8) A good building stone should have
   a) strength   b) hardness and toughness
   c) resistance to fire   d) all of the above

9) Initial setting time of cement concrete should not be less than
   a) 30 min   b) 120 min   c) 180 min   d) 360 min

10) 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)

11) Contour lines are widely spaced in case of
    a) Steep slope ground   b) Gentle slope ground
    c) Undulated ground   d) None of the above

12) 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

13) 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

14) 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

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Set R

Seat
No.

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

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′
BC	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**

3. a) Write the difference between prismatic compass and surveyors compass.   **2**

    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.   **7**

Set R

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**

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Set R

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

Duration : 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 ground   b) Gentle slope ground
   c) Undulated ground   d) None of the above

7) 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

8) 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

9) 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

10) Following angles can be set by open cross staff
   a) only 45°   b) only 90°
   c) either 45° or 90°   d) any angle

11) In whole circle bearing, a quadrantal bearing N66°30'W expressed as
   a) 295°30'   b) 293°30'   c) 290°30'   d) 294°30'

12) The roads are classified as per
   a) road material   b) road width   c) road location d) all of these

13) 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

14) 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

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Set S

| Seat No. | |

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

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′
BC	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**

3. a) Write the difference between prismatic compass and surveyors compass.   **2**

   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.   **7**

Set S

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**

_____

Set S