# SLOW LEARNER

Slow learners are identified based on their performance in Internal Examination and End Semester Examination. Pedagogical methodologies are followed to improve the slow learners on the same page as other learners. Some of the characteristics of slow learners are identified to understand them better among other students.

Activities For Slow Learners

Measures taken for improving academic performance of these students

- Remedial/Extra animated videos provided with appropriate focus on the subject/topic codes in which the students are found to be slow learners.
- Individual academic counselling is done by concerned subject teacher.
- Student must to be solve extra assignments and tutorials.
- Students study groups are formed for peer-to-peer learning.
- Personal counselling is done through mentoring (Teacher guardian) scheme which takes care of the student's mentors maintain the entire academic record of the student which is also conveyed to the parent's time to time by the teacher guardian. Slow learners are counselled and motivated by the mentors.
- Encouraging to read books with simple language for easy understanding
- Giving additional learning materials like question bank, university question papers etc.

Process:

- Conduct group activities to boost interactive learning and confidence among them.
- Organize games related to their learning topic in order to instill a curiosity towards it.
- Come up with oral activities where students are encouraged to express their ideas.
- Rectify their mistakes and guide them properly to formulate their ideas into words.
- Curate exercises and homework with lower difficulty levels and gradually increase the difficulty level for the students to get acquainted with the topics at a slower pace.

Counselling and Mentoring

A counselling committee formed at our college interacts with students, when they come to know that a student has some problems (be it in academics or personal life). The student is put at ease by interacting with the committee members and a strict counsel is done to solve the problem of the student to the extent possible. Counselling in charge officer spends time every week to interact with students who need moral support, guidance and suggestions to increase their relaxation level in the institution.

Subject animated videos

One common characteristic among slow learners is that they often learn better by seeing and hearing than by reading. This should be no surprise, because performance in basic skill areas, including reading usually is below grade level among slow learners. Incorporating films, videotapes, and audio into lessons helps accommodate the instruction to the strategies learning modalities among slow learners. Emphasizing concrete and visual forms of content also helps compensate for the general difficulty slow learners have in grasping abstract ideas and concepts

Solving question banks

Provision of extra time in time table for problem solving sessions/ revision session Make up classes and demonstration classes for practical courses Assignments in the form of solving previous years examination paper Supply of question bank for practice personal attention and counselling for providing special hints and problem solving techniques

Additional assignment & tutorials

Advanced assignments or tasks like participation in Seminars/ Conferences/ Technical events Contribution in questionnaire preparation and conduction of case studies and support in team building activities Encouragement to complete NEPTEL and similar courses Assistance for industry internships and field trainings Provision to explore the talents through MoU's with reputed institutions Each faculty should prepare report after final result declaration showing improvement in the performance of slow learners to close the loop

Their most obvious characteristic is a limited attention span compared to more able students. To keep these students actively engaged in the learning process requires more than the usual variation in presentation methods (direct, indirect), classroom climate (co-operative, competitive), and instructional materials (films, workbooks, co-operative games, simulations). If this variation is not part of your lesson, these students may well create their own variety in ways that disrupt your teaching. Other immediately noticeable characteristics of slow learners are their deficiencies in basic skills (reading, writing, and mathematics), their difficulty in comprehending abstract ideas, and most disconcerting, their sometimes unsystematic and careless work habits.

Group study with advanced learner

This is one of the most effective strategies for slow learners. Parents and teachers should encourage slow learners to study in groups. The more a child interacts with others of his/her age, the more confident he/she will feel

Roles and Responsibilities of Course Coordinator:

- The subject teacher is responsible for carrying out different aspects of slow and advanced learners including identification and activities to be conducted.
- Conduction of class test.
- Preparation of marking scheme and assessment rubrics

- Evaluation of answer sheets and preparation of result reports
- Identification of slow and advanced learners
- Preparation of problem-solving sessions/ revision classes.
- sessions for slow learners and maintenance of records
- Mentoring helps the students with depression, mobile addiction, habit addiction and relationship issues etc to get relieved of the same to help in better academic performance.
- Further, many students come from rural areas and have difficulties in understanding the subject taught in English with scientific terminologies. The faculty understands and takes the class in Tamil language along with English to enable clarity and easier learning.

Impact:

1. Weak Students performance was improved in the semester exam by clearing the papers.
2. The number of arrears of individual student is reduced.
3. The students became eligible for the placement after clearing arrears.

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641013

DEPARTMENT OF CIVIL ENGINEERING

COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

IV SEMESTER   CIVIL A   UNIT TEST - II

-LIST OF STUDENTS

COUNSELLING DATE & TIME:

Sl. No.	REG. No.	NAME	No. of Subjects less than 25	SIGNATURE
1	1711102	Abirami S	3	
2	1711103	Abitha A	3	
3	1711106	Balamurugan P	6	
4	1711109	Charulatha N	3	
5	1711111	Dharani Devi R	3	
6	1711113	Dhivya N	3	
7	1711117	Elavarasan V	6	
8	1711122	Gokulraj S	3	
9	1711123	Gopinath R	3	
10	1711124	HariKaran M	6	
11	1711126	Harishankar P	5	
12	1711131	Jenson R	6	
13	1711132	Kalpana B	3	
14	1711135	Karthick D	3	
15	1711136	Karthigeyan S	5	
16	1711144	Lokesh S	5	
17	1711147	Manoj Prabhakar T	3	
18	1711148	Manoj S	5	
19	1711149	Miruthula S	3	
20	1711150	Mohamed Mohideen Badhusha P J	5	
21	1711304	Kalai Selvan S	3	
22	1711305	Kamalesh Rajaa S	3	
23	1711310	Priya U	4	
24	1711L01	Aravind Kumar V	5	
25	1711L02	Arundhathy S	3	
26	1711L03	Boopathi P	1	
27	1711L04	Devipriyadharshini B	3	
28	1711L05	Dharanitharan M	5	
29	1711L07	Dinesh K	5	
30	1711L08	Divyananth L	5	
31	1711L14	Mothish G	3	
32	1711L15	Naveena M	4	
33	1711L19	Ranjini K	1	

22/3/2019
FACULTY ADVISOR

22/3/19
HEAD OF THE DEPARTMENT

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641013

DEPARTMENT OF CIVIL ENGINEERING

### COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

III – SEMESTER, CIVIL A

UNIT TEST - II

Class Comittee Meeting : 08.10.2018

LIST OF STUDENTS

COUNSELLING DATE & TIME: 12-10-2018 4PM

Sl. No.	REG. No.	NAME	No. of Subjects < 25	SIGNATURE
1	1711106	BALAMURUGAN P	6	P. Balamurugan
2	1711117	ELAVARASAN V	5	V. Elavarasan
3	1711123	GOPINATH R	3	R. Gopinath
4	1711124	HARI KARAN M	4	M. Hari
5	1711135	KARTHICK D	3	D. Karthick
6	1711136	KARTHIGEYAN S	4	S.
7	1711144	LOKESH S	5	
8	1711150	MOHAMED MOHIDEEN BADHUSHA P.J	3	
9	1711304	KALAISELVAN S	6	R. Kala
10	1711L01	ARAVIND KUMAR V	5	V. Aravinda Kumar
11	1711L03	BOOPATHI P	5	
12	1711L07	DINESH K	4	Dinesh
13	1711L08	DIVYANANTH L	5	

12.10.18

FACULTY ADVISOR

HEAD OF THE DEPARTMENT

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE.13
II YEAR CIVIL ENGINEERING - IV SEMESTER A (2017 Batch)

Year : 2018-2019   UNIT TEST 1 ATTENDANCE   MAXIMUM : 100   UPTO : 31-01-2019

S.No.	REG. No.	NAME	16CBS401	16CES402	16CES403	16CPC404	16CPC405	16CPC406	16CPC407	16CES408
		Total No. of Hours upto UT 1	24	12	15	18	18	18	16	16
1	1711101	Abinaya Sri M	96	100	93.3	94.4	94.4	94 95	100	100
2	1711102	Abirami S	88	91.67	86.6	83.3	94.4	94 95	100	100
3	1711103	Abitha A	96	100	93.3	94.4	94.4	94 96	100	100
4	1711104	Ajay Sundar S M	96	100	93.3	94.4	94.4	94 95	100	100
5	1711105	Anista V	85	91.67	86.6	88.8	88.8	89 90	75	75
6	1711106	Balamurugan P	(63)	(50)	(46.6)	(55.5)	(61.1)	(61) 65	75	75
7	1711107	Blessy A	83	91.67	86.6	77.7	83.3	83 65	75	100
8	1711108	Bruntha M	92	100	86.6	83.3	83.3	83 90	100	100
9	1711109	Charulatha N	96	100	93.3	94.4	94.4	94 95	100	100
10	1711110	Chinnan Anandhi	92	91.67	93.3	88.8	83.3	83 60	75	100
11	1711111	Dharani Devi R	96	100	93.3	94.4	94.4	94 95	100	100
12	1711112	Dharshini M	92	91.67	80	88.8	83.3	83 90	100	100
13	1711113	Dhivya N	88	100	93.3	94.4	94.4	94 90	100	100
14	1711114	Dhivya Bharathi N	96	100	93.3	94.4	94.4	94 95	100	100
15	1711115	Divya Dharshni R	100	100	93.3	100	100	100 100	100	100
16	1711116	Elangovan C	96	100	86.6	99.4	94.4	94 95	100	100
17	1711117	Elavarasan V	75	83.33	(40)	(55.5)	(50)	(50) 50	100	100
18	1711118	Ethanika T	96	91.67	80	88.8	77.7	78 85	100	100
19	1711120	Gogila Priya Y	92	91.67	86.6	88.8	94.4	94 95	100	100
20	1711121	Gokulapriya S	92	91.67	93.3	88.8	88.8	89 85	100	100
21	1711122	Gokulraj S	96	100	86.6	94.4	94.4	94 95	75	100
22	1711123	Gopinath R	96	91.67	86.6	83.3	94.4	94 90	75	100
23	1711124	HariKaran M	83	75	(66.6)	(66.6)	77.7	78 (60)	75	100
24	1711126	Harishankar P	96	83.33	(66.6)	88.8	83.3	83 95	100	100
25	1711127	Harishkumar P	96	91.67	86.6	94.4	88.8	89 90	100	100
26	1711128	Indhuja N S	100	100	93.3	100	100	100 95	100	100
27	1711129	Jayasudhan M	96	100	93.3	94.4	94.4	94 95	100	100
28	1711130	Jeevanantham S	88	91.67	86.6	88.8	94.4	94 95	100	100
29	1711131	Jenson R	75	100	93.3	(66.6)	77.7	78 70	75	75
30	1711132	Kalpana B	88	91.67	86.6	88.8	88.8	89 95	100	100
31	1711133	Kanimozhi M	79	(58.33)	(53.3)	66.6	(61.1)	61 65	100	100
32	1711135	Karthick D	100	100	80	88.8	94.4	94 95	100	100
33	1711136	Karthigeyan S	88	91.67	86.6	77.7	94.4	94 90	100	75
34	1711138	Kaviya S	96	91.67	93.3	88.8	88.8	89 55	100	100
35	1711140	Keerthiga R	96	91.67	93.3	88.8	94.4	94 95	100	100
36	1711141	Khaveyarasan P A	100	100	93.3	94.4	94.4	94 95	100	100
37	1711143	Kowsikkumar S	75	75	(93.3)	(72.2)	(72.8)	(72.?)	75	75
38	1711144	Lokesh S	96	100	80	88.8	88.8	89	100	100
39	1711145	Mahalakshmi S	100	100	93.3	94.4	94.4	94 95	100	100
40	1711147	Manoj Prabhakar T	96	91.67	86.6	88.8	83.3	83 95	100	100
41	1711148	Manoj S	(71)	(66.67)	(93.3)	(61.1)	(66.6)	(67)	(50)	75
42	1711149	Miruthula S	92	100	93.3	88.8	94.4	94 95	100	100
43	1711150	Mohamed Mohideen Badhusha P J	(71)	(66.67)	(66.6)	(66.6)	(66.6)	(67)	100	50
44	1711151	Mohanapriya A	92	91.67	80	77.7	88.8	89 90	100	100

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-13
II YEAR CIVIL ENGINEERING - IV SEMESTER A (2017 Batch)

Year : 2018-2019 UNIT TEST I ATTENDANCE MAXIMUM :100

Sl.No	REG. No.	NAME	16CBS401	16CES402	16CES403	16CPC404	16CPC405	16CPC406	16CPC407	16CES408
		Total No. of Hours upto UT I	24	12	15	18	18	18	16	
45	1711301	Archana A	92	100	86.6	88.8	88.8	89 90	100	75
46	1711304	Kalai Selvan S	96	91.67	80	83.3	83.3	83 75	100	100
47	1711305	Kamalesh Rajaa S	96	83.33	86.6	83.3	83.3	83 90	100	100
48	1711307	Keerthana Sree E	100	100	93.3	94.4	94.4	94 95	100	100
49	1711310	Priya U	100	100	93.3	94.4	94.4	94 95	100	100
50	1711311	Ragavi M	92	83.33	93.3	88.8	83.3	83 55	100	100
51	1711314	Vennmayuuri T	100	100	93.3	94.4	94.4	94 95	100	100
52	1711L01	Aravind Kumar V	96	100	86.6	94.4	83.3	83 85	100	100
53	1711L02	Arundhathy S	100	91.67	86.6	88.8	100	100 95	100	100
54	1711L03	Boopathi P	(63)	(50)	(53.3)	83.3	(50)	(20)(50)	75	75
55	1711L04	Devipriyadharshini B	96	91.67	(73.3)	(55.5)	88.8	89 65	100	100
56	1711L05	Dharanitharan M	96	91.67	86.6	88.8	94.4	94 95	100	100
57	1711L07	Dinesh K	(58)	(50)	(46.6)	(55.5)	(55.5)	(56 52)	75	(50)
58	1711L08	Divyananth L	79	83.33	(53.3)	(55.5)	(66.6)	(67 30)	75	75
59	1711L13	Mohamed Silmi B	100	100	93.3	88.8	94.4	94 90	100	100
60	1711L14	Mothish G	96	100	86.6	88.8	88.8	89 40	100	100
61	1711L15	Naveena M	(67)	83.33	86.6	(72.2)	83.3	83 60	(50)	75
62	1711L19	Ranjini K	96	91.67	80.3	83.3	83.3	83 80	100	100
63	1711L21	Varshaa P	100	100	93.3	88.8	94.4	94 95	100	100
		Staff Signature								

16CBS401 Numerical Methods

16CES402 Mechanics of Solids – II

16CES403 Applied Hydraulics and Fluid Machines

16CPC404 Basic Structural Design I (Masonry and Steel)

16CPC405 Surveying - II

16CPC406 Water Supply Engineering

Th.K.Rajupillai

Dr.R.Thenmozhi

Dr.D.Padmini

Th. V.Satheesh Kumar

Th. S.Makesh Kumar

Th.K.Rajesh Kumar

FACULTY ADVISOR
8/2/19

HOD OF CIVIL ENGINEERING (UG)
8/2/19

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641013

DEPARTMENT OF CIVIL ENGINEERING

COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

V – SEMESTER, CIVIL A   UNIT TEST – I

LIST OF STUDENTS

COUNSELLING DATE & TIME:

Sl. No.	REG. No.	NAME	No. of subjects < 25	SIGNATURE
1.	1711106	BALAMURUGAN P	6	P. Balamurugan
2.	1711116	ELANGOVAN C	3	C. Elangovan
3.	1711117	ELAVARASAN V	4	V. Elavarasan
4.	1711122	GOKULRAJ S	4	S. Gokulraj
5.	1711124	HARI KARAN M	6	M. Hari Raj
6.	1711126	HARI SHANKAR P	4	P. Harishankar
7.	1711131	JENSON R	5	R. Jenson
8.	1711136	KARTHIGEYAN S	5	S. Kvf
9.	1711138	KAVIYA S	3	S. Kaviya
10.	1711144	LOKESH S	4	S. Lokesh
11.	1711148	MANOJ S	3	S. manoj
12.	1711150	MOHAMED MOHIDEEN BADHUSHA PJ	6	PJ Zaidh
13.	1711L01	ARAVIND KUMAR V	3	V. Aravinda kumar.
14.	1711L02	ARUNDHATHY S	4	S. Arun
15.	1711L03	BOOPATHI P	6	P. Boopathi
16.	1711L05	DHARANITHARAN M	5	M. Dhithn
17.	1711L07	DINESH K	5	ABSENT
18.	1711L08	DIVYANANTH L	6	Divyanth
19.	1711L15	NAVEENA M	3	M. Naveena

FACULTY ADVISOR   HEAD OF THE DEPARTMENT

22/8/2019

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641013

DEPARTMENT OF CIVIL ENGINEERING

COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

V – SEMESTER, CIVIL A   UNIT TEST – I

LIST OF STUDENTS

COUNSELLING DATE & TIME:

Sl. No.	REG. No.	NAME	No. of subjects < 25	SIGNATURE
1.	1711106	BALAMURUGAN P	6	P. Balamurugan
2.	1711116	ELANGOVAN C	3	C. Elangovan
3.	1711117	ELAVARASAN V	4	V. Elavarasan
4.	1711122	GOKULRAJ S	4	S. Gokulraj
5.	1711124	HARI KARAN M	6	M. Hari Karan
6.	1711126	HARI SHANKAR P	4	P. Harishankar
7.	1711131	JENSON R	5	R. Jenson
8.	1711136	KARTHIGEYAN S	5	S. Kart.
9.	1711138	KAVIYA S	3	S. Kaviya
10.	1711144	LOKESH S	4	R. Lojaoh
11.	1711148	MANOJ S	3	S. manoj.
12.	1711150	MOHAMED MOHIDEEN BADHUSHA PJ	6	PJ Zaidh
13.	1711L01	ARAVIND KUMAR V	3	V. Aravinda kumar.
14.	1711L02	ARUNDHATHY S	4	S. Arundhathy
15.	1711L03	BOOPATHI P	6	P. Boopathi
16.	1711L05	DHARANITHARAN M	5	M. Dhithn
17.	1711L07	DINESH K	5	ABSENT
18.	1711L08	DIVYANANTH L	6	Divyananth
19.	1711L15	NAVEENA M	3	M. Nav

FACULTY ADVISOR   05/09/2019   HEAD OF THE DEPARTMENT   5/9/2019

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641013
DEPARTMENT OF CIVIL ENGINEERING
COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

VI – SEMESTER, CIVIL A

UNIT TEST – I

LIST OF STUDENTS

COUNSELLING DATE & TIME:

Sl. No.	REG. No.	NAME	No. of subjects < 25
1.	1711106	BALAMURUGAN P	4
2.	1711117	ELAVARASAN V	4
3.	1711124	HARI KARAN M	4
4.	1711126	HARI SHANKAR P	4
5.	1711131	JENSON R	6
6.	1711136	KARTHIGEYAN S	4
7.	1711144	LOKESH S	3
8.	1711148	MANOJ S	5
9.	1711150	MOHAMED MOHIDEEN BADHUSHA PJ	6
10.	1711501	SHUNMUGASURYA S	3
11.	1711L01	ARAVIND KUMAR V	3
12.	1711L05	DHARANITHARAN M	3
13.	1711L08	DIVYANANTH L	4

27/8/2019
FACULTY ADVISOR

27/8/2019
HEAD OF THE DEPARTMENT

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE-641013

DEPARTMENT OF CIVIL ENGINEERING

COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

VI - SEMESTER, CIVIL A

UNIT TEST   II

LIST OF STUDENTS

COUNSELLING DATE & TIME:

Sl. No.	REG. No.	NAME	No. of subjects < 25
1.	1711106	BALAMURUGAN P	4
2.	1711117	ELANGOVAN C	3
3.	1711117	ELAVARASAN V	4
4.	1711124	HARI KARAN M	4
5.	1711131	JENSON R	3
6.	1711136	KARTHIGEYAN S	4
7.	1711150	MOHAMED MOHIDEEN BADHUSHA PJ	3
8.	1711L02	ARUNDHATHY	3
9.	1711L05	DHARANITHARAN M	3
10.	1711L08	DIVYANANTH L	4

27/9/2020

FACULTY ADVISOR

27/9/2020

HEAD OF THE DEPARTMENT

DEPARTMENT OF CIVIL ENGINEERING

GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE – 641013
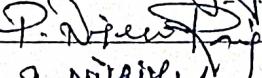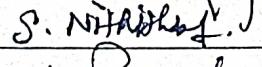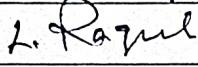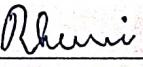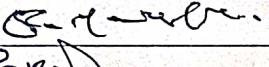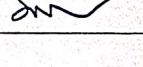
COUNSELLING TO STUDENTS FOR POOR PERFORMANCE AND ABSENTEES IN THE UNIT TEST

VI – SEMESTER, CIVIL B   UNIT TEST - I
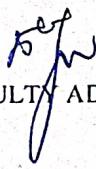
LIST OF STUDENTS
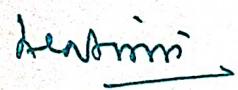
COUNSELLING DATE & TIME : 20/3/18 , 3.00 pm

SL NO	REG NO	NAME	SIGNATURE
1	1511162	R. NAVEEN	
2	1511165	P. NIRMAL RAJ	
2	1511167	S. NITHTHISHKUMAR	
3	1511174	L. RAGUL	
4	1511181	V. RHENIUS JEBASTIN	
5	1511185	D. SHARVAJETH	
6	1511204	E. YESWANTH	
7	1511L15	P. NESAMANI	
8	1511191	S. SUBASHCHANDRABOSE	

FACULTY ADVISOR   HEAD OF THE DEPARTMENT

GOVERNMENT COLLEGE OF TECHNOLOGY

COIMBATORE-13

DEPARTMENT OF CIVIL ENGINEERING

18CPC601 - STRUCTURAL ANALYSIS II

1. Which of the following structural loads are not applied commonly to a building?

a) Environmental load b) Live load c) Dead load d) **Rain load**

2. Which of the following is statically determinate structure?

a) Two hinged arch b) Fixed beam c) **Double overhanging** d) Continuous beam

3. If we use link support in a structural system, then how many unknowns would we have?

a) 1 b) 2 c) 0 d) 4

4. Which of the following material is not used in making trusses?

a) Metal bars b) **Concrete** c) Wooden struts d) Channel

5. Which structure will perform better during earthquake?

a) Statically determinate and indeterminate b) Depends upon magnitude of earthquake

c) Statically indeterminate d) Statically determinate

6. Principle of superposition is applicable when

(A)**Deflections are linear functions of applied forces**

(B) Material obeys Hooke's law

. (C) The action of applied forces will be affected by small deformations of the structure

(D) None of the above

7. Which of the following methods of structural analysis is a force method?

(A) Slope deflection method (B) **Column analogy method**

(C) Moment distribution method (D) None of the above

8. Which of the following is not the displacement method?

(A) Equilibrium method (B) **Column analogy method** (C) Moment distribution method

(D) Kani's method

9. The three moments equation is applicable only when

(A) The beam is prismatic (B) There is no settlement of supports

(C) There is no discontinuity such as hinges within the span

(D) The spans are equal

10. The fixed support in a real beam becomes in the conjugate beam a

(A) Roller support (B) Hinged support (C) Fixed support **(D) Free end**

11. In the displacement method of structural analysis, the basic unknowns are

(A) **Displacements** (B) Force (C) Displacements and forces (D) None of the above

12. The principle of virtual work can be applied to elastic system by considering the virtual work of

(A) Internal forces only (B) External forces only (C) **Internal as well as external forces**

(D) None of the above

13. Bending moment at any section in a conjugate beam gives in the actual beam

(A) Slope (B) Curvature (C) **Deflection** (D) Bending moment

14. Degree of static indeterminacy of a rigid-jointed plane frame having 15 members, 3 reaction components and 14 joints is

(A) 2 **(B) 3** (C) 6 (D) 8

15. Effects of shear force and axial force on plastic moment capacity of a structure are respectively to

(A) Increase and decrease (B) Increase and increase (C) Decrease and increase

(D) Decrease and decrease

18CPC602 - FOUNDATION ENGINEERING

1. For shear strength, triaxial shear test is suitable because

(A) It can be performed under all three drainage conditions

(B) Precise measurement of the pore pressure and volume change during the test is possible

(C) Stress distribution on the failure plane, is uniform

(D) All the above

2. The zero atmospheric pressure is at

(A) Sea level (B) Water table (C) Phreatic surface (D) **Both (B) and (C)**

3. Terzaghi's bearing capacity factors Nc, Nq and Nr are functions of

(A) Cohesion only (B) **Angle of internal friction only** (C) Both cohesion and angle of internal friction (D) None of the above

4. The general relationship between specific gravity (G), weight of water ($\gamma\omega$), degree of saturation (Sr), void ratio (e) and bulk density (γ), is

(A) $\gamma = (S - eSr)\gamma\omega/(1 + e)$

(B) $\gamma = (G + eSr)\gamma\omega/(1 + e)$

(C) $\gamma = (1 + e)\gamma\omega/(G + Sr)$

(D) $\gamma = (1 - Sr)e/(G + Sr)$

18CPC603 - WATER RESOURCES ENGINEERING

1. Generally the weir is aligned at right angles to the direction of the main river current because

(A) It ensures less length of the weir

(B) It gives better discharging capacity

(C) It is economical

(D) All of the above

2. A straight glacis type fall with a baffle platform and a baffle wall is called

(A) Vertical drop-fall (B) Glacis fall (C) Montague type fall (D) Inglis fall

3. The meander pattern of a river is developed by

(A) Average discharge (B) Dominant discharge (C) Maximum discharge (D) Critical discharge

4. The ratio of the average load to the installed capacity of the plant whose reserve capacity is zero will be equal to

(A) Load factor (B) Plant factor (C) Utilization factor (D) Both (A) and (B)

5. The most suitable chemical which can be applied to the water surface for reducing evaporation is

(A) Methyl alcohol (B) Ethyl alcohol (C) Cetyl alcohol (D) Butyl alcohol

6. The shape of recession limb of a hydrograph depends upon

(A) Basin characteristics only (B) Storm characteristics only

(C) Both (A) and (B) (D) None of the above

7. If the critical shear stress of a channel is XC, then the average value of shear stress required to move the grain on the bank is

(A) 0.5 XC (B) 0.75 TC (C) XC (D) 1.33 TC

8. The flow of water after spilling over the weir crest in chute spillway and side channel spillway respectively are

(A) At right angle and parallel to weir crest

(B) Parallel and at right angle to weir crest

(C) Parallel to weir crest in both

(D) At right angle to weir crest in both

9. Hydrodynamic pressure due to earthquake acts at a height of

(A) 3H/4π above the base

(B) 3H/4π below the water surface

(C) 4H/3π above the base

(D) 4H/3π below the water surface, where H is the depth of water.

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5. 'Loess' is silty clay formed by the action of

(A) Water (B) Glacier (C) Wind (D) Gravitational force

6. Rise of water table in cohesion-less soils upto ground surface reduces the net ultimate bearing capacity approximately by

(A) 25 % (B) 50 % (C) 75 % (D) 90 %

7. A decrease in water content results in a reduction of the volume of a soil in

(A) Liquid state (B) Plastic state (C) Semi solid state (D) All of these

8. In non-cohesive soil in passive state of plastic equilibrium

(A) Major principal stress is horizontal

(B) Minor principal stress is vertical

(C) Major principal stress is vertical

(D) Minor and major principal stresses are equally inclined to the horizontal

9. A soil has a bulk density of 22 kN/m3 and water content 10 %. The dry density of soil is

(A) 18.6 kN/m3 (B) 20.0 kN/m3 (C) 22.0 kN/m3 (D) 23.2 kN/m3

10. Through a point in a loaded soil, the principal stress is maximum on

(A) Minor principal plane (B) Intermediate principal plane (C) Major principal plane

(D) None of these

11. The expression [Gs/(1 + ωGs)] ρω is used for

(A) Dry density (B) Bulk density (C) Degree of saturation (D) Optimum water content

12. If the sand in-situ is in its densest state, then the relative density of sand is

(A) Zero (B) 1 (C) Between 0 and 1 (D) Greater than 1

13. If dry density, water density and specific gravity of solids of a given soil sample are 1.6 g/cc, 1.84 g/cc and 2.56 respectively, the porosity of the soil sample, is

(A) 0.375 (B) 0.370 (C) 0.380 (D) 0.390

14. The property of a soil which permits water to percolate through it, is called

(A) Moisture content (B) Permeability (C) Capillarity (D) None of these

15. Toughness index is defined as the ratio of

(A) Plasticity index to consistency index

(B) Plasticity index to flow index

(C) Liquidity index to flow index

(D) Consistency index to liquidity index

10. Select the correct statement.

(A) A meander increases the river length but a cut off reduces the river length

(B) A cut-off increases the river length but a meander reduces the river length

(C) Both meander and cut-off increase the river length

(D) Both meander and cut-off decrease the river length

11. Select the incorrect statement.

(A) Intensive irrigation should be avoided in areas susceptible to water logging

(B) Extensive irrigation should be adopted in areas susceptible to water logging

(C) Lift irrigation increases water logging

(D) All of the above

12. In India, which of the following is adopted as standard recording rain-gauge?

(A) Symon's rain-gauge (B) Tipping bucket type

(C) Natural siphon type (D) Weighing bucket type

13. The flow-mass curve is graphical representation of

(A) Cumulative discharge and time

(B) Discharge and percentage probability of flow being equaled or exceeded

(C) Cumulative discharge, volume and time in chronological order

(D) Discharge and time in chronological order

14. Main purpose of mean water training for rivers is

(A) Flood control

(B) To provide sufficient depth of water in navigable channels, during low water periods

(C) To preserve the channel in good shape by efficient disposal of suspended and bed load

(D) All of the above

15. A divide wall is provided

(A) At right angle to the axis of weir

(B) Parallel to the axis of weir and upstream of it

(C) Parallel to the axis of weir and downstream of it

(D) At an inclination to the axis of weir

18CPE621 - HIGHWAY AND RAILWAY ENGINEERING

1. Group index method of design of flexible pavement is

(A) A theoretical method

(B) An empirical method based on physical properties of sub-grade soil

(C) An empirical method based on strength characteristics of sub-grade soil

(D) A semi empirical method

2. Which of the following is considered to be the highest quality construction in the group of black top pavements?

(A) Mastic asphalt (B) Sheet asphalt (C) Bituminous carpet (D) Bituminous concrete

3. Los Angeles testing machine is used to conduct

(A) Abrasion test (B) Impact test (C) Attrition test (D) Crushing strength test

4. When the width of car parking space and width of street are limited, generally preferred parking system is

(A) Parallel parking (B) 45° angle parking (C) 65° angle parking (D) 90° angle parking

5. When the bituminous surfacing is done on already existing black top road or over existing cement concrete road, the type of treatment given is

(A) Seal coat (B) Tack coat (C) Prime coat (D) Spray of emulsion

6. In the penetration macadam construction, the bitumen is

(A) Sprayed after the aggregates are spread and compacted

(B) Premixed with aggregates and then spread

(C) Sprayed before the aggregates are spread and compacted

(D) None of the above

7. The drain which is provided parallel to roadway to intercept and divert the water from hill slopes is known as

(A) Sloping drain (B) Catch-water drain (C) Side drain (D) Cross drain

8. The function of an expansion joint in rigid pavements is to

(A) Relieve warping stresses (B) Relieve shrinkage stresses

(C) Resist stresses due to expansion (D) Allow free expansion

9. Select the correct statement.

(A) More the value of group index, less thickness of pavement will be required

(B) More the value of CBR, greater thickness of pavement will be required

(C) Minimum and maximum values of group index can be 0 and 20 respectively

(D) All of the above

Correct Answer

10. Penetration test on bitumen is used for determining its

(A) Grade (B) Viscosity (C) Ductility (D) Temperature susceptibility

8. How much load is acceptable on one circuit in home electric system?

A. 4 KW B. 5 KW C. 3 KW D. 10 KW

9. How much maximum current is allow in single circuit for home electric system?

A. 20A B. 10A C. 25A D. 15A

10. What is functions of home water supply system?

A. to provide a fresh water

B. distribute the water thought out a home

C. store the water inside the home

D. all of the above

11. Flushing is one of the method of cleaning

A. water pipe B. sewer pipe C. steam pipe D. drain pipe

12. The approaches made for inspection & cleaning of sewers is called

A. trap B. cover C. manhole D. drain

13. The process of supplying fresh air into a closed space for removal of foul smell is called

A. airing B. venting C. proving D. ventilation

14. Ventilation depends on

A. humidity B. temperature C. air change D. all of the above

15. In some cases of repairs of girders damaged by collision, the damage is severe what is used?

A. Trusses and bars B. Struts and pins C. Links and Dowels D. Lace and anchores

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11. In soils having same values of plasticity index, if liquid limit is increased, then

(A) Compressibility and permeability decrease and dry strength increases

(B) Compressibility, permeability and dry strength decrease

(C) Compressibility, permeability and dry strength increase

(D) Compressibility and permeability increase and dry strength decreases

12. The maximum limit of water absorption for aggregate suitable for road construction is

(A) 0.4 % (B) 0.6 % (C) 0.8 % (D) 1.0 %

13. The critical combination of stresses for corner region in cement concrete roads is

(A) Load stress + warping stress frictional stress

(B) Load stress + warping stress + frictional stress

(C) Load stress + warping stress

(D) Load stress + frictional stress

14. In highway construction, rolling starts from

(A) Sides and proceed to center (B) Center and proceed to sides

(C) One side and proceed to other side (D) Any of the above

15. The most economical lighting layout which is suitable for narrow roads is

(A) Single side lighting (B) Staggered system (C) Central lighting system (D) None of the above

18CPE624 – MAINTENANCE AND REHABILITATION

1. The high pH of the fresh concrete make a thin oxide film around the reinforcement steel

A. true B. false C. none D. all

2. The pH value of fresh concrete is around

A. 10 B. 11 C. 11.5 D. 12.5

3. If the cracks width is less than 0.1 mm then they are called

A. fine B. thin C. medium D. wide

4. Surface coating is also one of the methods of treating cracks.

A. true B. false C. none D. all

5. Painting work should be start after 3 to 6 month of plastering on new walls.

A. true B. false C. none D. all

6. How much time required for curing of cement paints?

A. 2 – 3 hr B. 4 – 10 hr C. 6 – 7 hr D. 1 – 2 hr

7. Use of electricity is measured in _____ for home electric system.

A. V B. W C. kWh D. mA

18CHS401-CIVIL ENGINEERING - SOCIATAL AND GLOBAL IMPACT

How many percent of carbon dioxide increased in atmosphere since the pre-industrial times?

A. About 10%

B. About 20%

C. About 30%

D. About 40%

ANSWER : C

2) which one of the following result takes place due to global warming?

A. Maintaining steady temperature

B. Changes in the rainfall

C. Pleasant environment

D. Causing less pollution

(a) About 10%

(b) About 20%

(c) About 30%

(d) About 40%

ANSWER : B

3) one of the first steps in implementing BIM is to appoint a _____.

A. Chief drafter

B. Job captain

C. BIM manager

D. Lead architect

ANSWER: C

4) the first Asian country to become industrialized was _____.

A. India

B. Japan

C. China

D. None of the mentioned

ANSWER: B

5) the industrial revolution led to an increase in _____.

A. Population

B. Imports

C. Free time activities

D. None of the mentioned

ANSWER:

6) which among the following is not related to GIS software's?

A. CAD

B. Arc GIS

C. Arc view

D. STAAD pro

ANSWER: D

7) which of the following doesn't determine the capability of GIS?

A. Defining a map

B. Representing cartographic feature

C. Retrieving data

D. Transferring data

ANSWER: D

8) who measures the global warming rate?

A. Astrologers

B. Physicist

C. Philosopher

D. Climatologist

ANSWER: D

9) production of fertilizers is related to _____ revolution.

A. Green

B. White

C. Pink

D. Grey

ANSWER: D

10) one of the biggest reasons that BIM has had more growth in the _____ sector is competition.

A. Residential

B. Commercial

C. Civil

D. Structural Steel

ANSWER: B

11) the virtual building model in a BIM project, called a BIM model, serves as the foundation of the project.

A. True

B. False

C. none

D. all

ANSWER: A

12) when a firm decides to transition to a BIM system from a traditional design process, there is more involved that just switching to a _____ modeling software.

A. 2D

B. 3D

C. 4D

D. CADD

ANSWER: B

13) our effect on the environment – a combination of what we consume and the waste we produce.

A. Ecological fingerprint

B. Ecological footprint

C. Ecological image

D. Ecological history

ANSWER: B

14) spatial databases are also known as _____.

A. Geo databases

B. Mono databases

C. Concurrent databases

D. None of the above

ANSWER: A

15) what is the definition of ecological footprint?

A. The impact of a person on their neighbours

B. The impact of a person on the environment

C. The impact of the oceans towards erosion

D. How much pollution an animal produce

ANSWER: B

18CBS402-ENGINEERING GEOLOGY

1) The property of a mineral by virtue of which it can be cut with a knife is _____

a) Parting
b) Sectile
c) Malleable
d) Ductile

ANSWER : B

2) Mica is _____
a) Flexible
b) Rigid
c) Flexible and elastic
d) Elastic

A

3) The SI unit of specific gravity is _____

a) Ohm
b) g/cc
c) N/cc
d) No unit

ANSWER: D

4) Rocks which are formed from weathering products of *preexisting rocks deposited* near earth's surface are called as

(a) Igneous rocks

(b) Sedimentary rocks

(c) Metamorphic rocks

(d) None of the above

ANSWER: B

5) % of continential crust is occupied by oceanic water of

a) 10

b) 60

c) 40

d) 20

ANSWER: A

6) One set of cleavage is seen in

a) feldspar

b) mica

c) calcite

d) fluorite

ANSWER: B

7)Rocks which are made up of one mineral are called as

(a) monomineralic

(b) polymineralic

(c) both

(d) none of these

Answer: a

8) The father of geology is

(a) Alfred Wegner

(b) James Hutton

(c) John Butler

(d) Art smith

Answer: b

9) What derives the earth's internal heat engine ?

(a) radioactivity

(b) volcanoes

(c) ocean tides

(d) solar energy

Answer: a

10) Igneous rock changes to metamorphic rock by process of

(b) compaction

(c) heat & pressure

(d) weathering(a) magma cooling

and erosion

Answer: d

11) The lithosphere is approximately thick.

(a) 50-100 km

(b) 100-200 km

(c) 5-10 km

(d) 1-2 km

Answer: a

12) Diamond is having hardness number

(a) 10

(b) 7

(c) 1

(d) 2

Answer: b

13) Cleavage means

(a) development of crystal faces during mineral growth

(b) Splitting a mineral along planner surfaces

(c) development of irregular fractures when minerals is broken

(d) density and specific gravity of minerals.

Answer: b

14) The element which is having highest volume per cent in the continental crust of earth is

(a) aluminium

(b) oxygen

(c) iron

(d) sodium

Answer: b

15) Crust and lithosphere are having same meaning.

(a) true

(b) false

Answer: b

18CES403- CONSTRUCTION MATERIALS AND TECHNOLOGY

1) Which of the following building material have high Seismic resistance and flexibility of nailed joints.

a) Husk

b) Bamboo

c) Timber

d) Ply

2) Which of the following is not a type of composite masonry?

a) Stone composite masonry

b) Cement concrete masonry

c) Glass block masonry

d) Brick composite masonry

3) Which of the following reasons is not a type of mortar?
a) Lime mortar
b) Lemon mortar
c) Cement-lime mortar
d) Cement mortar

4) . A wall may be defined as that component of a building, whose width is _____ times its thickness.
a) 2
b) 4
c) 6
d) 8

5) The temporary framework is known as _____ and it is useful in construction demolition, maintenance or repair works.
a) Grouting
b) Scaffolding
c) Shoring
d) Underpinning

6) In which of the following type of construction, the square or rectangular blocks of stones are used?
a) Rubble masonry
b) Rock Masonry
c) Ashlar masonry
d) Brick masonry

7) Which of the following is provided on the horizontal shores when one building is higher than the other?
a) Flying shore
b) Pile Underpinning
c) Pit Underpinning
d) Raking shore

8) While manufacturing the concrete masonry bricks, the cement aggregate ratio should not be thinner than _____.
a) 1:6
b) 1:3
c) 3:4
d) 1:4

9) For structures which are regularly wetting and drying, the water cement ratio by weight should be _____ and _____ for thin section respectively.
a) 0.55, 0.45
b) 0.45, 0.55
c) 0.55, 0.65
d) 0.65, 0.55

10) The _____ is used to measure the workability of concrete mixture which is commonly used in the field.
a) Vee-bee test
b) Slump test
c) Compaction factor
d) Workability test

11) _____ roof is just similar to a couple roof except that the legs of the common after are connected by tie beam.
a) Collar and scissor
b) Collar beam
c) Couple-close
d) Couple

12) The _____ consists of one part of cement to four parts of clean, coarse and angular river sand by volume.
a) Lime Mortar
b) Water proof mortar
c) Cement mortar
d) Hydraulic Mortar

13) An _____ is a structure which is constructed to span across an opening.
a) Doors
b) Windows
c) Arches
d) Bridges

14) Which of the following is a mixture of cement, sand, pebbles or crushed rock and water, which, when placed in the skeleton of forms and are allowed to cure, becomes hard like a stone?
a) Cement mortar
b) Cement grouting
c) Cement concrete
d) Cement slurry

15) Which of the following is not a type of composite masonry?
a) Stone composite masonry
b) Cement concrete masonry
c) Glass block masonry
d) Brick composite masonry

18CPC404- BASIC STRUCTURAL DESIGN-I (STEEL)

1) Which of the following method is best for the design of steel structure?
a) Working Stress Method
b) Earthquake Load Method
c) Limit State Method
d) Ultimate Load Method

2) Which of the following is a disadvantage of Steel?
a) High durability
b) Reusable
c) High strength per unit mass
d) Fire and corrosion resistance

3) Which of the following relation is correct?
a) Design Strength = Ultimate strength / Partial factor of safety
b) Design Strength = Ultimate strength + Partial factor of safety
c) Design Strength = Ultimate strength * Partial factor of safety
d) Design Strength = Ultimate strength − Partial factor of safety

4) Which of the following load combination is not possible?
a) Dead load + imposed load
b) Dead load + wind load + earthquake load
c) Dead load + imposed load + wind load
d) Dead load + imposed load + earthquake load

5) Proof stress for minimum bolt tension is :
a) $0.7f_{yb}$
b) $0.5f_{yb}$
c) $0.7f_{ub}$
d) $0.5f_{ub}$

6) Which of the following relation about plastic moment is correct?
a) $M_p = Z_p + f_y$
b) $M_p = Z_p f_y$
c) $M_p = Z_p - f_y$
d) $M_p = Z_p / f_y$

7) Which of the following factor is considered for classification of cross section?
a) length of member
b) location where member is used
c) seismic force
d) width-to-thickness ratio

8) What is the net section area of steel plate 40cm wide and 10mm thick with one bolt if diameter of bolt hole is 18mm?
a) **38.2 cm²**
b) 24 cm²
c) 578 mm²
d) 465 mm²

9) Which of the following is not a compression member?
a) tie
b) strut
c) rafter
d) boom

10) Which of the following factors is included in the limit state of serviceability?
a) Brittle facture
b) Fracture due to fatigue
c) Failure by excessive deformation
d) Deformation and deflection adversely affecting appearance or effective use of structure

11) The partial factor of safety for resistance governed by yielding is :
a) 1.10
b) 1.5
c) 2.0
d) 1.25

12) The partial factor of safety for resistance governed by ultimate strength is :
a) 1.10
b) 1.5
c) 2.0
d) 1.25

13) The failure of one or more critical sections in _____
a) Flexure
b) Breakage
c) Bondage
d) Prestress

14) The horizontal shear is generally governed by _____

a) Shear limit state

b) Ultimate limit state

c) Principle limit state

d) Tensile limit state

15) The higher value of compressive stress is permissible only in _____

a) I section

b) Composite sections

c) L sections

d) Prestressed sections

18CPC405- APPLIED HYDRAULICS AND FLUID MACHINERY

1) The property by virtue of which a liquid opposes relative motion between its different layers is called

(A) Surface tension

(B) Coefficient of viscosity

(C) Viscosity

(D) Osmosis

2) In an immersed body, centre of pressure is

(A) At the centre of gravity

(B) Above the centre of gravity

(C) Below be centre of gravity

(D) Could be above or below e.g. depending on density of body and liquid

3) The unit of surface tension is

(A) N/m

(B) N/m2

(C) N/m3

(D) N-m

4) The efficiency of power transmission through pipe is (where H = Total supply *head, and hf* = Head lost due to friction in the pipe)

(A) (H - hf)/H

(B) H/(H - hf)

(C) (H + hf)/H

(D) H/(H + hf)

5) The hydraulic mean depth or the hydraulic radius is the ratio of

(A) Area of flow and wetted perimeter

(B) Wetted perimeter and diameter of pipe

(C) Velocity of flow and area of flow

(D) None of these

7) The hydraulic mean depth for a circular pipe of diameter (d) is

(A) d/6

(B) d/4

(C) d/2

(D) d

8) Ratio of inertia force to surface Jension is known as

(A) Mach number

(B) Froude number

(C) Reynolds's number

(D) Weber's number

9) The Reynold's number of a ship is _____ to its velocity and length.

(A) Directly proportional

(B) Inversely proportional

(C) Square root of velocity

(D) None of these

10) The value of coefficient of discharge is _____ the value of coefficient of velocity.

(A) Less than

(B) Same as

(C) More than

(D) None of these

11) The error in discharge (dQ/Q) to the error in measurement of head (dH/H) over a triangular notch is given by

(A) dQ/Q = 3/2 × (dH/H)

(B) dQ/Q = 2 × (dH/H)

(C) dQ/Q = 5/2 × (dH/H)

(D) dQ/Q = 3 × (dH/H)

12) A one dimensional flow is one which

(A) Is uniform flow

(B) Is steady uniform flow

(C) Takes place in straight lines

(D) Involves zero transverse component of flow

13) A liquid compressed in cylinder has a volume of 0.04 m3 at 50 kg/cm² and a volume of 0.039 m3 at 150 kg/cm². The bulk modulus of elasticity of liquid is

(A) 400 kg/cm²

(B) 4000 kg/cm²

(C) 40 × 10⁵ kg/cm²

(D) 40 × 10⁶ kg/cm²

14) The property of a fluid which enables it to resist tensile stress is known as

(A) Compressibility

(B) Surface tension

(C) Cohesion

(D) Adhesion

15) Newton's law of viscosity is a relationship between

(A) Pressure, velocity and temperature

(B) Shear stress and rate of shear strain

(C) Shear stress and velocity

(D) Rate of shear strain and temperature

18CPC406- WASTE WATER ENGINEERING

1) How is Chemical Oxygen Demand (COD) calculated?

a) Waste water is oxidised chemically using strontium in acid solutions

b) Waste water is oxidised chemically using bromine in acid solutions

c) Waste water is oxidised chemically using dichromate in acid solutions

d) Waste water is oxidised chemically using sodium in acid solutions

2) What is the minimum diameter of pipes used for drainage of waste water?

a) 105 mm

b) 50 mm

c) 100 mm

d) 75 mm

3) Which of the following type of waste water treatment process is used for treating waste water or industrial waste water using aeration and biological flocs?

a) Biological aeration

b) Anaerobic digestion

c) Active sludge process

d) Aeration

4) Which of the following process is employed to gain sufficient head for the waste water?

a) Fermentation

b) Oxidation

c) Screening

d) Pumping

5) Which of the following is the most commonly used coagulant?
a) Ferric sulphate
b) Coal
c) Alum
d) Limestone

6) What is the minimum percentage of solids in waste water?
a) 60 %
b) 50 %
c) 30 %
d) 40 %

7) ow many hours does it take for filters to attain turbidity breakthrough?
a) 12-16 hours
b) 18-22 hours
c) 23-36 hours
d) 38-42 hours

8) Which of the following methods are not used for pathogen destruction?
a) Composting
b) Incineration
c) Mechanical stirring
d) Thermophilic digestion

9) What is the waste water from kitchen sinks called?
a) Brown water
b) Yellow water
c) Black water
d) Grey water

10) What is the colour of septic waste water?
a) Light brown
b) Dark brown
c) Black
d) Grey

11) Which of the following waste water does not contain sewage?
a) Sewerage
b) Grey water
c) Sullage
d) Sewage

12) What is the specified minimum time for backwash of rapid filters?
a) 2 minutes
b) 5 minutes
c) 10 minutes
d) 3 minutes

13) A grit chamber is usually installed _____ *primary sedimentation tanks*
a) Before
b) After
c) In between
d) In

14 What is the minimum time of aeration?
a) 20 minutes
b) 40 minutes
c) 60 minutes
d) 80 minutes)

15) At what pH should the water be maintained?
a) 6.5
b) 7.5
c) 8.5
d) 9

18CPC409- ENVIRONMENTAL SCIENCE AND ENGINEERING

1) Environmental science is defined by which of the following statements?
a) study of the interactions between the environment's and humans only
b) study of the interactions between the environment's and physical components
c) study of the interactions between the environment's and chemical components
d) study of the interactions between the environment's physical, chemical, and biological components

2) Which of the following is a renewable source of energy?
a) Ocean currents
b) Solar energy
c) Biomass
d) All of the above

3) Which of the following gas is released when alum is added to water?
a) Ca (OH)₂
b) CO₂
c) Al (OH)₃
d) CaSO₄

4) Which of the following water treatment process is done after filtration of water?
a) Secondary sedimentation
b) Flocculation
c) Primary sedimentation
d) Disinfection

5) Which of the following radiations of the sun do greenhouse gases trap?
a) Infrared radiations
b) UV radiations
c) Visible radiations
d) All the radiations

6) The chemical most commonly used to increase speed of sedimentation of sewage is

(A) Sulphuric acid

(B) Copper sulphate

(C) Lime

(D) Sodium permanganate

7) Why carbon dioxide is called a greenhouse gas?
a) Because they absorb heat
b) Because they absorb moisture
c) Because they absorb oxygen
d) Because they absorb hydrogen

8) Which of the following is NOT a primary pollutant?
a) Oxygen
b) Ground-level ozone
c) Carbon monoxide
d) Carbon dioxide

9) Which of the mentioned devices are used for removing vapour phase/gaseous pollutants?
a) Thermal oxidisers
b) Absorption towers
c) Catalytic converters
d) All of the mentioned

10) Which of the following type of pollution is Cultural eutrophication?
a) Noise pollution
b) Thermal pollution
c) Soil pollution
d) Water pollution

11) Which of the following type of pollution is Cultural eutrophication?
a) Noise pollution
b) Thermal pollution
c) Soil pollution
d) Water pollution

12) What is the size range of respirable suspended particulate matter?
a) Less than 1 micrometre
b) Less than 10 micrometre
c) Less than 100 micrometre
d) Less than 0.1 micrometre

13) What is the size range of atmospheric particulate matter?
a) 0.1 – 10 microns
b) 0.1 – 1 micron
c) 1 – 10 microns
d) 10 – 100 microns

14) Below which of the following pH is rain regarded as 'acid rain'?
a) 7
b) 7.3
c) 5.6
d) 6

15) Which of the following gases are main contributors to acid rain?
a) Carbon dioxide and carbon monoxide
b) Sulphur dioxide and carbon dioxide
c) Sulphur dioxide and nitrogen dioxide
d) Sulphur dioxide and nitrous oxide

GOVERNMENT COLLEGE OF TECHNOLOGY
COIMBATORE-13

DEPARTMENT OF CIVIL ENGINEERING

Course Title: Professional Practices, Ethics and Building Bye-laws

Course Code: 18CHS501

1. The term Right is derived from the Latin _____
   a) Ritus   b) Ritchus   c) Rectus   d) Rightss

   Ans: c) Rectus

2. Normative science deals with _____
   a) Standards   b) Facts   c) Judgements   d) None of these

   Ans: a) Standards

3. Ethics deals with the standards to describe _____
   a) Good and evil   b) True and false   c) Right and good   d) All of these

   Ans: c) Right and good

4. An intention which the agent does not definitely avows to himself is called _____
   a) Remote intention   b) Formal intention   c) Unconscious intension
   d) Conscious intension

   Ans: c) Unconscious intension

5. _____ refers to how long the pleasure or pain are felt for.
   a) Certainty   b) Duration   c) Propinquity   d) Intensity

   Ans: b) Duration

6. "The motive means, of course, what moves us or causes us to act in a particular way". Who asserted this?
   a) Mcdougall   b) Hobbles   c) Mackenzie   d) Mathew Arnold

   Ans: c) Mackenzie

7. Which is not a Building Bye-Laws Characteristic?
   a) The rules must be specific, clear and the language of rules should be grammatically correct
   b) Terms used should be defined clearly so that there must be one and only one meaning of the term
   c) Due to some special conditions and requirements, some bye-laws differ from the bye-laws of other places
   d) No modification is allowed if required

   Ans: No modification is allowed if required

8. A _____ is a set of rules that specify the standards for constructed objects such as buildings and non-building structures.
   a) Building code   b) Building bye-laws   c) IS code   d) Procedure

   Ans: a) Building code

9. Fire safety is the set of practices intended to reduce the destruction caused by fire.
   a) True   b) False

   Ans: a) True

10. Which is not a type of building?
    a) Educational Building   b) Mercantile Building   c) Institutional Building
    d) Domestic building

    Ans: d) Domestic building

11. Which is not included in building codes?
    a) Mechanical integrity   b) Safety   c) Providing employment   d) Structural integrity

    Ans: c) Providing employment

12. Combining two or more plots as a single plot is called _____
    a) Amalgamation   b) Frontage   c) Bifurcation   d) Building setback

    Ans: a) Amalgamation

13. Which of the following is not a zone?
    a) Residential   b) Commercial   c) Industrial   d) Electrical

    Ans: d) Electrical

14. Line up to which the plinth of a building adjoining a street may be law-fully extended is called?
    a) Building line   b) Building boundary   c) Building extend   d) Building plan

    Ans: a) Building line

15. For industrial unit having area more than 0.8 hectare, and 5% area can be used as a general parking.
    a) True   b) False

    Ans: a) True

Course Title: Structural Analysis I

Course Code: 18CPC502

1. Which of the following is false for deflection of a point nearby a fixed support?
   - a) Displacement and slope is zero
   - b) Displacement as well as slope is non-zero
   - c) Displacement is zero
   - d) Slope is zero

   Ans: b) Displacement as well as slope is non-zero

2. Which structure will perform better during earthquake?
   - a) Statically determinate and indeterminate
   - b) Depends upon magnitude of earthquake
   - c) Statically indeterminate
   - d) Statically determinate

   Ans: c) Statically indeterminate

3. Which of the following is carried by truss members?
   - a) flexural load
   - b) bending load
   - c) axial load
   - d) shear load

   Ans: c) axial load

4. If a structure has total 10 joints, then what should be the minimum no. of joints in which equilibrium equations should be concurrently satisfied for stability?
   - a) 9
   - b) 10
   - c) 8
   - d) 7

   Ans: b) 10

5. Which of the following methods for solving indeterminate structures are easiest for computational purposes?
   - a) Displacement method
   - b) Method of consistent deformation
   - c) Moment area method
   - d) Force method
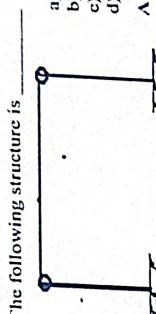
   Ans: a) Displacement method

6. To draw qualitative ILD of indeterminate structure, which of the following concept is used.
   - a) Mullers Breslou's Principle
   - b) Kani's Method
   - c) Unit Load Method
   - d) Castigilano's First energy theorem

   Ans: Mullers Breslou's Principle

7. Which of the following material will have the highest value of response modification factor?
   - a) Structural steel frames
   - b) Reinforced concrete shear walls
   - c) Wood
   - d) Reinforced concrete frames with flexible joints

   Ans: a) Structural steel frames

8. The following structure is _____

   - a) Statically Unstable
   - b) Geometrically Unstable
   - c) Internally Unstable
   - d) Stable

   Ans: d) Stable

9. in an interior beam, adjacent structures are exactly similar then the tributary area is -
   - a) Obtuse triangle
   - b) Right angled triangle
   - c) Acute triangle
   - d) Trapezium
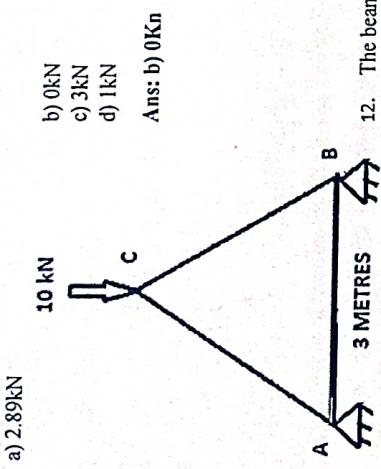
   Ans: b) Right angled triangle

10. Carryover Moment at end B due to moment M applied at end A for the given beam is
    _____

   - a) -M
   - b) +M2
    - c) +M
    - d) 0

    Ans: d) 0

11. Calculate the k value of the member BC for the given external redundant truss. considering the horizontal reaction of support B as a redundant force.
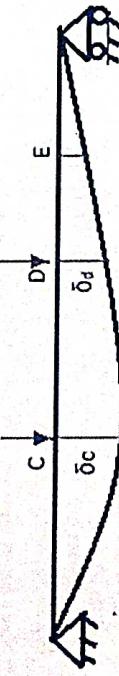
a) 2.89kN

10 kN


b) 0kN
c) 3kN
d) 1kN

Ans: b) 0Kn

12. The beam shown in the figure carries loads of 20kN and 40kN at point C and D respectively and produces a deflection of 6mm at point E. To produce a deflection of 8mm and 5mm at C and D respectively, the load required at E would be _____
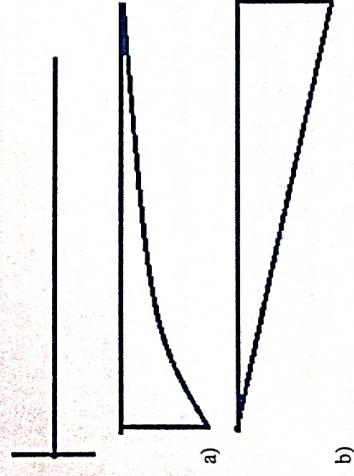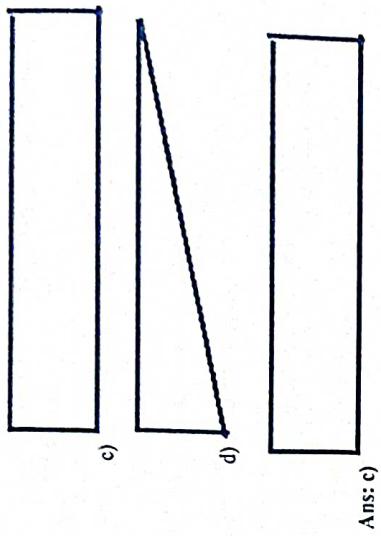

a) 40kN
b) 60kN
c) 20kN
d) 50kN

Ans: b) 60kN

13. ILD for the shear force at the support of the cantilever beam is _____

a)

b)

c)

d)
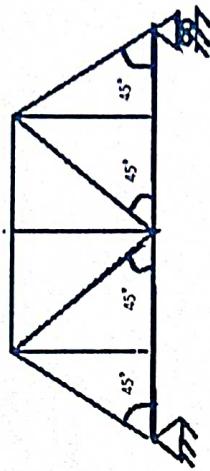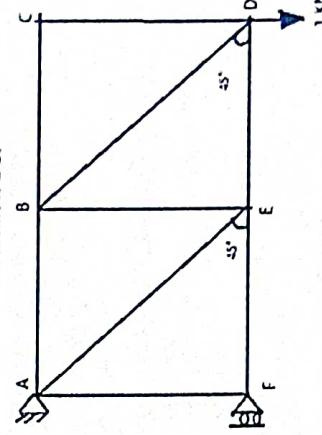
Ans: c)

14. Calculate the kinematic indeterminacy of the following pin jointed plane frame

a) 15
b) 12
c) 13
d) 14

Ans: c) 13

15. Calculate the force in member BC.

a) 0KN
b) 2−√ KN (TENSILE)

c) 1KN (TENSILE)
d) 1KN (COMPRESSIVE)

Ans: a) 0KN

Course Title: Basic Structural Design II (Concrete)

Course Code: 18CPC503

1. The maximum area of tension reinforcement in beams shall not exceed _____
   a) 2%
   b) 4%
   c) 0.15%
   d) 1.5%

Ans: b) 4%

2. The minimum cube strength of concrete used for a prestressed member, is _____
   a) 50 kg/cm^2
   b) 150 kg/cm^2
   c) 350 kg/cm^2
   d) 100 kg/cm^2

Ans: c) 350 kg/cm^2

3. The number of treads in a flight is equal to _____
   a) risers in the flight
   b) risers plus one
   c) risers minus one
   d) risers plus three

Ans: c) risers minus one

4. A foundation rests on _____
   a) base of the foundation
   b) subgrade
   c) foundation soil
   d) base of the foundation, subgrade and foundation soil

Ans: d) base of the foundation, subgrade and foundation soil

5. For initial estimate for a beam design, the width is assumed _____
   a) 1/15th of span
   b) 1/10th of span
   c) 1/20th of span
   d) 1/30th of span

Ans: d) 1/30th of span

6. Thickened part of a flat slab over its supporting column, is technically known as
   _____
   a) drop panel
   b) capital

c) column head
d) cannot be determined

Ans: a) drop panel

7. The diameter of longitudinal bars of a column should never be less than _____
   a) 6 mm
   b) 8 mm
   c) 10 mm
   d) 12 mm

Ans: d) 12 mm

8. What does R.C.C. stand for?
   a) Reinforced Cement Concrete
   b) Reinforced Concrete Cement
   c) Reinforced Combined Cement
   d) Reinforced Constituent Cement

Ans: a) Reinforced Cement Concrete

9. If the permissible compressive stress for a concrete in bending is C kg/m^2, the modular ratio is
   a) 2800/C
   b) 2300/2C
   c) 2800/3C
   d) 2800/C^2

Ans: c) 2800/3C

10. Design of a two-way slab simply supported on edges and having no provision to prevent the corners from lifting, is made by
    a) Rankine formula
    b) Marcus formula
    c) Rankine Grashoff formula
    d) Grashoff formula

Ans: c) Rankine Grashoff formula

11. Pick up the correct statement from the following:
    a) Lateral reinforcement in R.C.C. columns is provided to prevent the longitudinal reinforcement from buckling
    b) Lateral reinforcement prevents the shearing of concrete on a diagonal plane

1. The relative density of loose granular soil is given by the range _____ in percentage.

a) 0-15
b) 15-35
c) 35-65
d) 85-100

Ans: b) 15-35

2. The soviet liquid limit device is based on the principle of _____

a) Station penetration
b) Soil moisture
c) Soil water content
d) None of the mentioned

Ans: a) Station penetration

3. In Casagrande's plasticity chart, the numbers in the chart denotes

a) Relative suitability
b) Grade of the soil
c) Division of the group
d) None of the mentioned

Ans: a) Relative suitability

4. 7. The diameter of coarse-grained soils having single grained structure is

a) <0.002 mm
b) >0.002 mm
c) =0.002 mm
d) ≥0.002 mm

Ans: b) >0.002 mm

5. There is no strong repulsive force between soil particles because

a) Mobile cation will move along the surface
b) Cation will move opposite to each other
c) Cations replace each other
d) None of the mentioned

Ans: a) Mobile cation will move along the surface

6. Total vertical pressure at any plane is equal to _____

a) $\sigma = \sigma' + u$
b) $\sigma' = \sigma + u$
c) $\sigma = \sigma' + v$
d) None of the mentioned

Ans: a) $\sigma = \sigma' + u$

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c) Lateral reinforcement stops breaking away of concrete cover, due to buckling
d) All the above

Ans: d) All the above

12. Columns may be made of plain concrete if their unsupported lengths do not exceed their least lateral dimension

a) Two times
b) Three times
c) Four times
d) Five times

Ans: c) Four times

13. If the ratio of the span to the overall depth does not exceed 10, the stiffness of the beam will ordinarily be satisfactory in case of a

a) Simply supported beam
b) Continuous beam
c) Cantilever beam
d) None of these

Ans: c) Cantilever beam

14. For a ribbed slab

a) Clear spacing between ribs shall not be greater than 4.5 cm
b) Width of the rib shall not be less than 7.5 cm
c) Overall depth of the slab shall not exceed four times the breadth of the rib
d) All the above

Ans: d) All the above

15. The load stress of a section can be reduced by

a) Decreasing the lever arm
b) Increasing the total perimeter of bars
c) Replacing larger bars by the greater number of small bars
d) Replacing smaller bars by the greater number of greater bars

Ans: c) Replacing larger bars by the greater number of small bars

7. The hydraulic gradient (i), used in capillary-permeability test is _____

a) h0+hc/x
b) h0/x
c) h0+hc
d) hc/x

Ans: a) h0+hc/x

8. The co-efficient of transmissibility (T) of an aquifer is given by which of the following equation?

a) T=b k
b) T=b/k
c) T=(b k)2
d) T=k/b

Ans: a) T=b k

9. The coefficient of permeability is $6*10^{-7}$ cm/s for a soil with a certain liquid. If the viscosity is reduced to half, then the coefficient of permeability is _____

a) $6*10^{-7}$ cm/s
b) $17*10^{-7}$ cm/s
c) $8*10^{-7}$ cm/s
d) $12*10^{-7}$ cm/s

Ans: d) $12*10^{-7}$ cm/s

10. When the ground is horizontal, $\alpha=\pi/2$ in constant K. What will be the radial stress σ_r due to vertical line load?

a) $\sigma_r=Q\cos\theta r$
b) $\sigma_r=2Q\cos\theta\pi r$
c) $\sigma_r=Q\sin\theta r$
d) $\sigma_r=2Q\sin\theta r$

Ans: b) $\sigma_r=2Q\cos\theta\pi r$

11. The vertical stress on the solid cylindrical test apparatus is applied by _____

a) Major principal stress
b) Minor principal stress
c) Intermediate principal stress
d) All of the mentioned

Ans: a) Major principal stress

12. Theory of failure, was first proposed by _____

a) Coulomb
b) Mohr
c) Casagrande
d) Darcy

Ans: a) Coulomb

13. In Terzaghi's Theory of one-dimensional consolidation, the boundary is considered to be _____

a) free surface offering resistance to flow of water
b) free surface offering no resistance to flow of water
c) fixed surface offering resistance to flow of water
d) curved surface offering resistance to water flow

Ans: b) free surface offering no resistance to flow of water

14. Volume of water dv entering the well, when the head recuperates by dh is _____

a) dV=A/dh
b) dV=A.dh
c) dV=Khdt
d) dV=K.A

Ans: b) dV=A.dh

15. Group index is defined by which of the equation?

a) GI=0 2b+0.005ac+0.01bd
b) GI=0.2a+0.005bd+0.001ac
c) GI=0 2a+0.005ac+0.001bd
d) GI=0.2a+0.5ac+0.001bd

Ans: c) GI=0.2a+0.005ac+0.001bd