

To,
The Principal,
Karnatak Arts, Science and Commerce College,
Bidar.

30 Dec. 2021.


Sub: Permission to run two certificate courses.

Respected sir,

The department of physics is going to conduct two short term certificate courses during the year 2021-22, Titled "Basics of solar cell & Panels", and "Harnessing Wind Energy". Certificate courses are of 2 month duration, with intake of 40 students for each course. And the registration fee for each course will be of Rs.100/- for each student. Kindly permit us to collect 100/- from enrolled students as registration fee & to run the certificate courses successfully.

Thanking you

Yours Faithfully


S.P. Janawadkar
Head, Dept. of Physics

Permitted

PRINCIPAL
Karnatak Arts Sci. & Com. College
B I D A R-585 401

6/1/22



ಕರ್ನಾಟಕ ಕಲಾ, ವಿಜ್ಞಾನ ಹಾಗೂ ವಾಣಿಜ್ಯ ಮಹಾವಿದ್ಯಾಲಯ, ಬೀದರ
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE, BIDAR

Estd 1970

(Affiliated to Gulbarga University, Kalaburagi)

College with Potential for Excellence Status Awarded by UGC New Delhi

ISO 9001 : 2015



Golden Jubilee Celebration - 1970-2020

DEPARTMENT OF PHYSICS
CERTIFICATE COURSE – II
HARNESSING WIND ENERGY
BOARD OF STUDIES



- Chairman : Dr.Kalpana.V. Deshpande
Principal
Karnatak College Bidar
- Co-Ordinator : S.P Janwadkar
Associate Professor (Dept.of Physics)
- Subject Tutor : 1. Shweta Patil
2. DevikaRani
- External Members : 1. Dr.Eknath Halse
Gurunanak 1st Grade College,Bidar
2. Dr.Rajendra.Biradar
HOD Dept. of Electronics
Karnatak College Bidar

HOD
Physics

Dept. of Physics

Karnatak Arts, Science & Commerce College

Bidar

Principal
PRINCIPAL

Karnatak Arts Sci. & Com. College

Bidar



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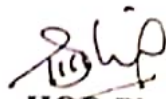


Golden Jubilee Celebration - 1970-2020

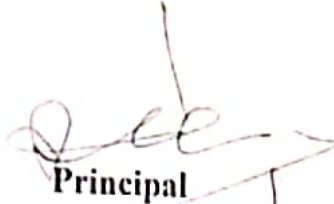
DEPARTMENT OF PHYSICS
CERTIFICATE COURSE – II
HARNESSING WIND ENERGY



Duration	:	1 Semester
Batch-I	:	Jan 2021 to March 2021
No. of Hours	:	30hrs
Theory	:	18hrs
Skill Component	:	12hrs
Maximum Intake	:	40 Students
Eligibility	:	UG Students (Regular) with Physics as Elective (Karnatak College Bidar)
Registration Fees	:	Rs. 100/-


HOD, Physics

- 1) Dr. Eknath Halse
- 2) Dr. Rajendra Binadani
- 3) Shweta Patil
- 4) Devikarani


Principal
PRINCIPAL
Karnatak Arts Sci. & Com. College
B I D A R-585 401

E-mail : principalkascc@gmail.com
Fax : 08482-226503

Hyderabad Road, Karnataka State - 585401.
Fax : 08482-226503

Cell : 9343834635
Visit us @ www.kascc.in.net

KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE BIDAR
DEPARTMENT OF PHYSICS



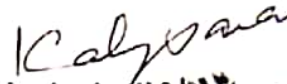
Date: 10/12/2019

A local BOS meeting is called in the department of physics to discuss about the start of two certificate courses 1. Basics of solar cell & panels & 2. Harnessing wind energy today at 5pm.




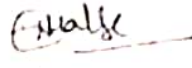

HOD Physics proposed to start two certificate courses as add on courses & the draft syllabus for them.

After the discussion the draft syllabus was approved with minor corrections the entire structure of the course and the examination pattern was finalized in the meeting.


HOD ~~PHYSICS~~
Physics
Karnatak Arts, Science & Commerce College Bidar


Principal
KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE
BIDAR-585 401

Members Present

1. Course Co-Ordinator : S.P. Janwadkar 
2. Subject Tutors : 1. Shweta Patil 
2. Devikarani 
3. External Members : 1. Dr. Eknath Halse 
Gurunanak First Grade College Bidar
2. Dr. Rajendra Biradar
HOD Electronics
Karnatak College Bidar 

KARNATAK ARTS, SCIENCE & COMMERCE COLLEGE
DEPARTMENT OF PHYSICS
CERTIFICATE COURSE I & II
PREAMBLE



Energy plays a vital role in the human life. We cannot even imagine our life without energy. But the sources of conventional energies are limited ones, and are going to get exhausted shortly. Hence there is an immense need to shift towards non-conventional evergreen energy resources. In order to introduce our students about harnessing such energies, need was felt to start a certificate course.

The available non - conventional energy resources at our local area were recognized as solar energy and wind energy.


Hence it is decided to continue the two certificate courses as add-on courses


- (1) Basics Solar cell & Panels**
- (2) Harnessing Wind Energy**

A local BOS is constituted to monitor the running of these courses at the institutional level comprising of following members

- | | | |
|------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman | : | Dr.Kalpana.V. Deshpande
Principal
Karnatak College Bidar |
| Co-Ordinator | : | S.P Janwadkar
Associate Professor (Dept.of Physics) |
| Subject Tutor | : | 1. Shweta Patil
2. DevikaRani |
| External Members | : | 1. Dr.Eknath Halse
Gurunanak 1 st Grade College,Bidar
2. Dr.Rajendra.Biradar
HOD Dept. of Electronics
Karnatak College Bidar |

The course content is decided to be completed during a span of two months and after its completion the students are expected to acquire knowledge about harnessing these non-conventional energies. Also should acquire the practical knowledge of assembling solar panels / erecting wind turbine to generate the electrical energy.


HOD
Physics


Principal
PRINCIPAL
Karnatak Arts Sci. & Com. Collr.
BIDAR-585 401



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Golden Jubilee Celebration - 1970-2020
DEPARTMENT OF PHYSICS

**CERTIFICATE COURSE – II
HARNESSING WIND ENERGY**

SYLLABUS
THEORY



- Unit 1 : Renewable Energy:** Need for Renewable Energy, Different Types of Renewable Energy. Potential of wind electricity generation in India & its current growth rate 4hrs
- Unit 2 : Wind Energy:** Basic principles of wind energy conversion, Site selection consideration, Basic components of wind energy conversion system. 4hrs
- Unit 3 : Classification of Wind Turbine:** Types of wind machines, Performance of wind Machines, Applications of wind energy. 6hrs
- Unit 4 : Wind Electricity Generation:** Coefficient of power, Betz limit, wind energy generators, power curve. 4hrs

PRACTICALS

12hrs

WIND ENERGY

1. Determination of start up speed and cut in speed of wind turbine.
2. Determination of the tip speed ratio (TSR) at different wind speeds.
3. To study the characteristics curve of turbine power v/s wind speed.
4. Determination of co-efficient of performance of wind Turbine.
5. Evaluation of efficient of change controller.
6. To study the characteristics curve of TSR v/s co- efficient of power.

[Signature]
Coordinator, BOS
Physics

- 1) Dr. Eknath N. Halte
- 2) Dr. Rajendra Bixodan
- 3) Shweta Patel

[Signature]
Principal &
Chairman, BOS
Karnatak Arts Sci. & Com. College
BIDAR-585 401

E-mail : principalkascc@gmail.com
Fax : 08482-226503

Hyderabad Road, Karnataka State - 585401.
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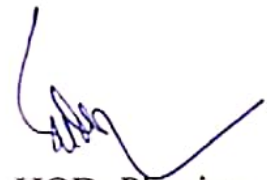
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KRE SOCIETY'S
Karnatak Arts Science and Commerce College, Bidar
Department of Physics
Certificate course – Harnessing Wind Energy

Outcomes

By the completion of this course students will:

1. Understand the basics of renewable, energy sources
2. Understand the need for Renewable energy sources
3. Understand wind resource, principles of conversion and technologies
4. Understand the operation and constraints of wind turbine generators
5. Analyze the performance of WECS



HOD, Physics

HOD,

Dept. of Physics

Karnatak Arts Sci. & Com. College Bidar

Department Of Physics

NOTICE

Date: 3/01/22

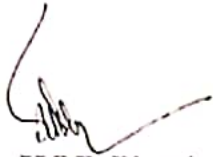
All the degree students with physics as elective subject are here by informed that, the department of Physics is introducing two short term certificate courses. The details are as follows:

Title	No. of Hrs	Registration fees
1. Basics of Solar Cell & Panels	30hrs	Rs.100/-
2. Harnessing Wind Energy	30hrs	Rs.100/-

Students, who are willing to enroll, need to contact

1. Ms. Shweta Patil
2. Miss. Shruti Swami
3. Miss. Devikarani

Note: the intake is limited to 40 Students per certificate course

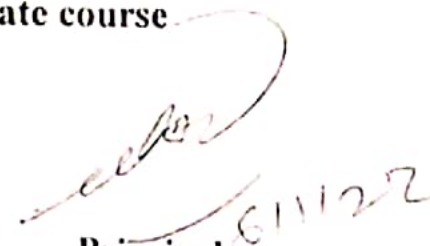


HOD Physics

(HOD)

Dept. of Physics

Karnatak Arts Sci. & Com. College Bidar



Principal

PRINCIPAL

Karnatak Arts Sci. & Com. College

B I D A R-585 401

KRE Society's
Karnatak Arts Science and Commerce College, Bidar
Department of Physics
Certificate Course 2021-22

Notice

D: 31-12-2021

All the students of B.Sc I, III and V semester, who have enrolled for certificates courses titled "Basics of Solar Cell and Panels" & "Harnessing Wind Energy", are hereby informed to attend the regular classes as per the time table mentioned.



Course In Charge



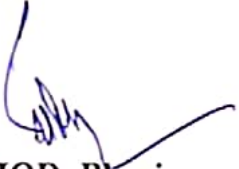
Principal

PRINCIPAL
Karnatak Arts Sci. & Com. Coll
BIDAR-585 401

Time Table
Certificate Course 2021-22
Harnessing Wind Energy

Effective from 11 Jan 2022

Day/Time	B.Sc III Sem 11am to 1pm
Tuesday	Group-I: 10 - PCM
Wednesday	Group II:11- PMCs
Thursday	Group III:12-PMCs


HOD, Physics
HOD,

Dept. of Physics

Karnatak Arts Sci. & Com. College Bidar



Principal

PRINCIPAL

Karnatak Arts Sci. & Com. Coll.

BIDAR-585401



Karnatak Arts, Science and Commerce College, Bidar



(Affiliated to Karnatak University, Kalaburagi)
College with Potential for Excellence

ADMISSION FORM

Certificate/Value added/Skill Development/Diploma/Advance Diploma Courses
or
IAS/IPS/NLT/SFT Coaching Classes

Name of the Department PHYSICS Year 2021-2022

Name of the Student Pannita Hasgond

Father's/Guardian's Name Sanju

Date of Birth Date

0	1
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 Month

0	8
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 Year

2	0	0	2
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Address for Correspondence

119 mi, Mirazapur Tq. Dist. Bidar
Post. Khasempur (P)

Semester/Class : IIIrd Semester

Register No S2174920

Percentage of previous semester : 8.5%

Contact No : 9113636589 / 9611868852

E-Mail ID : SanjukumarSanju971@gmail.com

Course to be joined: HARNESSING WIND ENERGY

Pannita.
Signature of the Student


HOD

Dept of Physics
Karnatak Arts & Com College Bidar


Principal
PRINCIPAL

Karnatak Arts Sci. & Com. Coll.
B I D A R - 585 401

DEPARTMENT OF PHYSICS
CERTIFICATE COURSE – II
Harnessing Wind Energy
2021 – 22
LIST OF STUDENTS

SL. NO	REG.NO	Name of Student	Phone No.	E-mail.ID	Amount
01	S2174920	Pranita.Sanju	9113636589	sanjukumarsanj971@gmail.com	100/-
02	S2174935	Pallavi.Tukaram	9611410713	pallavitukaramkalgond@gmail.com	100/-
03	S2174927	Swati.Channabasayya	8792039141	swatiswamy06@gmail.com	100/-
04	S2175072	Deepali.Shivajirao	7892085593	deepalikiranjekar8@gmail.com	100/-
05	S2174944	Aishwarya.Ashok	7019113366	aishwaryahugar47@gmail.com	100/-
06	S2174946	Sujata.Maruti	8123660989	sujatahasgond@gmail.com	100/-
07	S2174947	Kavita.Ambrut	8792703301	kavitadhoki@gmail.com	100/-
08	S2174950	Geeta.Basavaraj	9353936699	geetabiradar2002@gmail.com	100/-
09	S2174936	Nikita.Baburao	8088871796	shivukumarkhindri@gmail.com	100/-
10	S2174918	Shagufta.Tazcen	7204469155	shuguftatazeen@gmail.com	100/-
11	S2174909	Srushti.Tandle	9380224041	shruhitandle@gmail.com	100/-
12	S2175038	Vijaylaxmi.Shivraj	8073721930	malagevijaylaxmi120@gmail.com	100/-
13	S2174911	Jayashree.Shivashankarayya	7019266048	jmatapathi7019@gmail.com	100/-
14	S2174923	Poornima.Venkatrao	7975100915	kpoornima83@gmail.com	100/-
15	S2174921	Shruti.Rajkumar	9110814973	shruthiswamy98@gmail.com	100/-
16	S2174913	Shivaranjani.Vijaykumar	6360780014	shivaranjanishivranjani85@gmail.com	100/-
17	S2174925	Bhavani.Syidapure	7892782520	bhavanisbaidapure@gmail.com	100/-
18	S2174916	Harish.Gurunath	7483053814	harishkushnoor@gmail.com	100/-
19	S2175009	Pratham.Thakur	9353588816	prathamthakur2763@gmail.com	100/-
20	S2175062	Saikumar.Mathpati	8050902457	saikumarmathpati@gmail.com	100/-
21	S2175012	Shivani.Sherkhane	8217700649	sherkhaneshivani335@gmail.com	100/-
22	S2174991	Nikita.Shivaji	9741062335	nikitahalle731@gmail.com	100/-
23	S2174951	G.Sonika	9880991918	gsonikatelagani@gmail.com	100/-
24	S2175019	Jyoti.AshokKumar	9019300906	jyotitrimukhe9@gmail.com	100/-
25	S2175005	Vaishnavi.Ravindra	9845944067	Vaishnavimathpati559@gmail.com	100/-
26	S2174939	Jyoti.Kashinath	9036029339	jyotikashinath25@gmail.com	100/-
27	S2174999	Anjali.Basavaraj	6362114305	anjalisirse5002@gmail.com	100/-
28	S2175094	Ruchita.Metraskar	7899596221	rachitab495@gmail.com	100/-
29	S2175099	Nandita.Rajkumar	7022665732	nanditasadashiv732@gmail.com	100/-
30	S2175020	Arti.Ramesh	9480719151	artisonar78@gmail.com	100/-
31	S2175002	Ashwini.Suryakanth	8123639998	ashwinisuryakanth560@gmail.com	100/-
32	S2174993	Sanjeevini.Anjareddy	6360871873	sanjeevinihegade123@gmail.com	100/-
33	S2175065	Anjali.Ashok Reddy	8050437131	anjallireddyguradeo@gmail.com	100/-

HOD

HOD,

Dept. of Physics

Karnatak Arts Sci. & Com. College Bidar

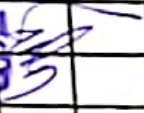
Principal
PRINCIPAL

Karnatak Arts Sci. & Com. College
BIDAR R-585 401

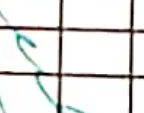
Karnatak Arts, Science And Students Attendance Register

K.R.E.
Society's
Commerce College
For the Month of Feb 20

Admission No.	Roll Number	Names	Date														
			No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
A06		Shraddha Tashere	1	4	11	18	25	01	08	15	22	29					
A07		Tranisha D/o Sanju	1	2	9	16	23	30	06	13	20	27					
A08		Durgali D/o Shrinidhi	1	2	9	16	23	30	06	13	20	27					
A13		Suati D/o Channabaiyasa	1	2	9	16	23	30	06	13	20	27					
A17		Pollavi D/o Tukaram	1	2	9	16	23	30	06	13	20	27					
A18		Nikita D/o Babasa	1	2	9	16	23	30	06	13	20	27					
A22		Aishwarya D/o Ashok	1	2	9	16	23	30	06	13	20	27					
A23		Sujata D/o Maruti	1	2	9	16	23	30	06	13	20	27					
A24		Kavita D/o Anbhair	1	2	9	16	23	30	06	13	20	27					
A26		Grota D/o Balaramaj	1	2	9	16	23	30	06	13	20	27					


 Pringipal
 Dept. of Physics
 Karnataka Arts & Science College

For the Month of Feb 20													
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 Pringipal
 Karnataka Arts & Science College
 P. O. No. 100

Karnati Sti

Karnatak Arts, Science And Students Attendance Register

K.R.E.

Admission No.	Roll Number	Names				Date
		I	II	III	IV	

C91	Sanjivani D/o Anjaleshdy				
C92	Anjali D/o Balaramraj				
C93	Saikumar Mathpal's				
C94	Akhilini Sushyakraath				
C95	Nandita D/o Rajkumar				
C96	Anjali D/o AshokReddy				
C99	Peratham S/o Girish				
C90	Shivani D/o Sanjivkumar				
C91	Tyoti D/o Ashokkumar				
C92	Ashanti D/o Ramesh				
C98	Anjale D/o Rajkumar				

No.	Date
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Society's

Commerce College Bidar For the Month of Jan, Feb 2022 & March 2022

No.	Date
15	15
16	16
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

KRE Society's

Karnatak Arts Science and Commerce College, Bidar


Department of Physics

Certificate Course 2021-22

Notice

D: 31-3-2022

All the enrolled students of certificate courses titled "Basics of Solar Cell and Panels" & "Harnessing Wind Energy", are hereby informed that an exam on these courses will be conducted on 9th April 2022 at the class rooms F-9 & F-10, from 11am to 12 noon.



HOD, Physics

D-pt. of Physics

Karnatak Arts Sci. & Com. College Bidar



Certificate course In charge



Principal

Karnatak Arts Sci. & Com. College
R I D - R-585 307

KRE SOCIETY'S
KARNATAK ARTS SCIENCE AND COMMERCE COLLEGE BIDAR
DEPARTMENT OF PHYSICS
CERTIFICATE COURSE – II
2021- 22
Harnessing Wind Energy
Students Exam Attendance

SL. NO	REG.NO.	Name of Student	Sign
01	S2174920	Pranita.Sanju	Pranita
02	S2174935	Pallavi.Tukaram	Pallavi
03	S2174927	Swati.Channabasayya	Swati
04	S2175072	Deepali.Shivajirao	Deepali
05	S2174944	Aishwarya.Ashok	Aishwarya
06	S2174946	Sujata.Maruti	Sujata
07	S2174947	Kavita.Ambrut	Kavita
08	S2174950	Geeta.Basavaraj	Geeta
09	S2174936	Nikita.Baburao	Nikita
10	S2174918	Shagufta.Tazeen	Shagufta Tazeen
11	S2174909	Srushti.Tandle	Srushti
12	S2175038	Vijaylaxmi.Shivraj	Vijaylaxmi
13	S2174911	Jayashree.Shivashankarayya	Jayashree
14	S2174923	Poornima.Venkatrao	Poornima
15	S2174921	Shruti.Rajkumar	Shruti
16	S2174913	Shivaranjani.Vijaykumar	Shivaranjani
17	S2174925	Bhavani.Syidapure	Bhavani
18	S2174916	Harish.Gurunath	Harish
19	S2175009	Pratham.Thakur	Pratham
20	S2175062	Saikumar.Mathpati	Saikumar
21	S2175012	Shivani.Sherkhane	Shivani
22	S2174991	Nikita.Shivaji	Nikita
23	S2174951	G.Sonika	G.Sonika
24	S2175019	Jyoti.AshokKumar	Jyoti
25	S2175005	Vaishnavi.Ravindra	Vaishnavi
26	S2174939	Jyoti.Kashinath	Jyoti
27	S2174999	Anjali.Basavaraj	Anjali
28	S2175094	Ruchita.Metraskar	Ruchita
29	S2175099	Nandita.Rajkumar	Nandita
30	S2175020	Arti.Ramesh	Arti
31	S2175002	Ashwini.Suryakanth	Ashwini
32	S2174993	Sanjeevini.Anjareddy	Sanjeevini
33	S2175065	Anjali.Ashok Reddy	Anjali

HOD, Physics

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Dept. of Physics

Karnatak Arts Sci. & Com. College Bidar

Principal

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KRE Society's
Karnatak Arts Science and Commerce College, Bidar
Department of Physics

Certificate Course-II
Harnessing Wind Energy
Question Paper 2021-22

Class :
Name of Student :
Reg. No. :

Date :
Time : 1 hour
Max. Marks : 30

Q.I Choose the correct answer for the following Questions

15x1= 15

1. Which among the following country in world leading in generating electricity using wind mills?
(A) Germany
(B) Italy
(C) Australia
(D) Denmark
2. The minimum speed of wind necessary for the satisfactory working of a wind generator to produce electricity is about _____
(A) 15 km/h
(B) 20 m/h
(C) 12 m/s
(D) 50 km/h
3. Largest wind energy farm in India is located in _____
(A) Maharashtra
(B) Gujarat
(C) Tamilnadu
(D) Rajasthan
4. The amount of energy available in the wind at any instant is proportional to ____ of the wind speed.
(A) Square root power of two
(B) Square root power of three
(C) Square power
(D) Cube power
5. Wind energy is harnessed as _____ energy with the help of windmill or turbine.
(A) Mechanical
(B) Solar
(C) Electrical
(D) Heat
6. Winds having following speed are suitable to operate wind turbines.
(A) 5 – 25m/s
(B) 10 – 35m/s
(C) 20 – 45m/s
(D) 30 – 55m/s

7. The following is (are) the classification of winds

- (A) Global wind
- (B) Local wind
- (C) Both (A) and (B)
- (D) None of the above

8. Global Cold wind move from

- (A) Polar to equatorial region
- (B) Equatorial to polar region
- (C) Equatorial to oceanic region
- (D) Oceanic to Equatorial region

9. Global Cold wind generated from Oceans moves to

- (A) Mountains
- (B) Equator
- (C) Plain areas
- (D) Poles

10. Name the windmill which has four blades mounted on a central post.

- (A) Post mill
- (B) Smock mill
- (C) Tower mill
- (D) Fan mill

11. Global winds towards westerly direction are known as

- (A) Trade winds
- (B) Western winds
- (C) Eastern winds
- (D) None of the above

12. Uneven heating occurs on land surface and water bodies are due to _____

- (A) Air Currents
- (B) Solar radiation
- (C) Lunar eclipse
- (D) None of the above

13. The following factor(s) affects the distribution of wind energy

- (A) Mountain chains
- (B) The hills, trees and buildings
- (C) Frictional effect of the surface
- (D) All of the above

14. How is the action of yaw controlled in small turbines?

- (A) Tail vane
- (B) Blades
- (C) Shaft
- (D) Yaw motor

15. What does WECS stands for?

- (A) Wind energy conversion system
- (B) Wind engine control system
- (C) Wind energy combined system
- (D) Wind engine comparison system

Q II. Answer the Flowing Questions

3x5= 15

1. Mention the types of Wind Parks/Farms. List the largest wind power plants in India.
2. Why utilization of wind is considered as part of solar technology?
3. Give some important factor consider for site selection of WECS.

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Karnatak Arts Science and Commerce College, Bidar
Department of Physics

29
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Certificate Course-II
Harnessing Wind Energy
Question Paper 2021-22

Class : 11th sem
Name of Student : Parnita A/. Sanju
Reg. No. : 52174920

Date : 9/4/22
Time : 1 hour
Max. Marks : 30

Q.I Choose the correct answer for the following Questions

15x1= 15

1. Which among the following country in world leading in generating electricity using wind mills?

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 (C) Australia
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- (B) Wind engine control system
- (C) Wind energy combined system
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Q II. Answer the Following Questions

3x5= 15

1. Mention the types of Wind Parks/Farms. List the largest wind power plants in India.
2. Why utilization of wind is considered as part of solar technology?
3. Give some important factor consider for site selection of WECS.

Q. II.

01. _____ 9

Ans: 01. Two types of wind parks/farms.

01 Onshore :- Onshore refer to wind turbines located on land

02 Offshore :- Offshore turbines are located at sea or in freshwater.

* The largest wind power plants in India.

- 01 Muppandal wind park (1064 1500 MV) - Rajasthan
- 02 Jaisalmer wind park/farm (1064 MV) - Tamilnadu
- 03 Brahmanvel wind farm (528 MV) - Maharashtra
- 04 Dhalgaon wind farm (278 MV) - Maharashtra
- 05 Vantuswade wind farm (259 MV) - Maharashtra
- 06 Vaspel (144 MV) - Maharashtra
- 07 Tuljapur (126 MV) - Maharashtra.
- 08 Belugappa wind park (100.8 MV) - Andhrapradesh
- 09 Mamthkheda wind park (100.5 MV) - Madhyapradesh
- 10 Anantapur wind park (100) - Andhrapradesh

02. _____ 1

02. Because,

Wind energy, form of solar energy i.e., "Produced by movement of air relative to Earth's surface." This is form of solar energy generated by uneven heating of

Earth's surface by sun and modified by Earth's rotation.

For as long as the sun shines and the wind blows the energy produced can be harnessed to send power across the grid.

- It is a clean fuel source
- It is sustainable
- Renewable
- Clean energy.

03. ——— ?

03. Some important factor consider for site selection of WECS

* High annual average wind speed

* Nature of ground

* Favourable land cost

* Nearness of site to local centre / uses

* local ecology

* Distance to road or railways

* Terrain and its aerodynamic

* Altitude of the proposed site

* Availability of wind $v(t)$ curve at proposed site

* wind structure at the proposed site.

DEPARTMENT OF PHYSICS
CERTIFICATE COURSE - II
2021 - 22
Harnessing Wind Energy
Marks List
B.Sc III sem

SL. NO	REG.NO.	Name of Student	Max. Marks	Obtained Marks
01	S2174920	Pranita.Sanju	30	29
02	S2174935	Pallavi.Tukaram	30	28
03	S2174927	Swati.Channabasayya	30	29
04	S2175072	Deepali.Shivajirao	30	27
05	S2174944	Aishwarya.Ashok	30	28
06	S2174946	Sujata.Maruti	30	29
07	S2174947	Kavita.Ambrut	30	27
08	S2174950	Geeta.Basavaraj	30	29
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10	S2174918	Shagufta.Tazeen	30	28
11	S2174909	Srushti.Tandle	30	21
12	S2175038	Vijaylaxmi.Shivraj	30	28
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16	S2174913	Shivaranjani.Vijaykumar	30	23
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19	S2175009	Pratham.Thakur	30	28
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21	S2175012	Shivani.Sherkhane	30	29
22	S2174991	Nikita.Shivaji	30	29
23	S2174951	G.Sonika	30	30
24	S2175019	Jyoti.AshokKumar	30	30
25	S2175005	Vaishnavi.Ravindra	30	25
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28	S2175094	Ruchita.Metraskar	30	30
29	S2175099	Nandita.Rajkumar	30	30
30	S2175020	Arti.Ramesh	30	29
31	S2175002	Ashwini.Suryakanth	30	29
32	S2174993	Sanjeevini.Anjareddy	30	30
33	S2175065	Anjali.Ashok Reddy	30	30

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Dept. of Physics

Karnatak Arts Sci. & Com. College BIDA

Principal

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Karnatak Arts Sci. & Com. Collr
BIDA R-585 401

KRE SOCIETY'S
KARNATAK ARTS SCIENCE AND COMMERCE COLLEGE BIDAR
DEPARTMENT OF PHYSICS

Certificate Course – Harnessing Wind Energy

Certificate Distribution

2021-22



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HOD,
Dept. of Physics
Karnatak Arts Sci & Com.
Bidar

[Handwritten Signature]
KARNATAK
Karnatak Arts Sci. & Com. Coll.
BIDAR-585 401



KARNATAK ARTS, SCIENCE AND COMMERCE COLLEGE, BIDAR
KRE SOCIETY'S
DEPARTMENT OF PHYSICS

2021-22

CERTIFICATE

This is to certify that Kumar/ Kumari Poornita Hasgond
of class B.Sc III/IV sem bearing Reg. No. 217494 has successfully completed
the short term course titled "HARNESSING WIND ENERGY"
during the Academic year 2021-22.

Sri. S.P. Janawadkar
Head, Dept. of Physics

Dr. M.S. Chelva
Principal

"Energy is the need of the hour"

KRE SOCIETY'S
KARNATAK ARTS SCIENCE AND COMMERCE COLLEGE BIDAR
DEPARTMENT OF PHYSICS
Certificate Course – Harnessing Wind Energy
Report
2021-22


The department has continued a self financed two certificate courses of 30 hrs duration, during the year 2021- 2022, titled “Basics of Solar Cell & Panels” & “Harnessing Wind Energy”

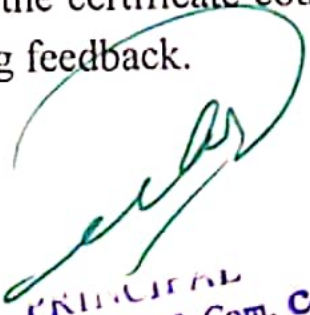
I. Course title : Basics of Solar Cell & Panels
Duration : 30hrs
Enrolled students : 57

II. Course title : Harnessing Wind Energy
Duration : 30hrs
Enrolled students : 33

Methodology : The introduction of B.Voc course in Renewable Energy & corresponding lab, Installation of 45kW Roof Top Solar Plant in the college premises made us to start this certificate course. To complete the theory part we utilized the beginning period of the semester when practical classes are about to start. As skill component part of this course 6 experiments are demonstrated batch wise. All the participants are given a booklet containing related theory & experimental details.

Conclusion: Students show good interest in both the certificate courses and express their opinion about these courses by giving feedback.


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Karnatak Arts Sci. & Com. College Bidar


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