

#### Assignment-4

Roll no..... Registration no..... Section.....

**30 Marks**

**Q1. Generate an idea and write it in the form of patent Annexure-1. Annexure-1 sample has been attached along with for your reference.**

#### **Annexure1**

#### **INVENTION DISCLOSURE FORM**

Details of Invention for better understanding:

1. **TITLE:** E-JACKET – Safe electronic jacket for extreme cold climate

2. **INVENTOR(S)/ STUDENT(S):**

A. Full name	Akash Gupta
Mobile No.	09501994809
Email (personal)	akash2588@gmail.com
UID/Registration number	19350
Permanent Address	Lovely professional University
B. Full name	Sandeep Kumar
Mobile No.	09706635559
Email (personal)	Sandeep.19416@lpu.co.in
UID/Registration number	19416
Permanent Address	Lovely professional University
C. Full name	Dr. Sahil Garg

Mobile No.	09915170565
Email (personal)	Sahil.24834@lpu.co.in
UID/Registration number	24834
Permanent Address	Lovely professional University

**3. DESCRIPTION OF THE INVENTION:-** Jacket is normally used to protect human beings from extreme cold weather conditions. This product is precisely beneficial for a person deployed in extremely cold weather conditions location where the temperature reaches from 10 degrees to -12 degree. To maintain the body temperature it is necessary a proper covering of body is required to avoid cold air or snow fall. The purpose of using E-jacket is to give special attention to those who face lots of issues in the extremely cold-weather region with appropriate safety attention.

**A. PROBLEM ADDRESSED BY THE INVENTION:** The motivation behind utilizing E-coat is to give exceptional consideration regarding the individuals who face heaps of issues in the incredibly chilly climate area like short breathing, Pneumonia, and so on wellbeing illnesses are related. To conquer these issues, Electronic coat is constrained by the temperature controller for better body warming at outrageous atmosphere condition. It ought to likewise have safety features regarding to oppose fire.

**B. STATE OF THE ART/ RESEARCH GAP:**

S. No.	Patent Number	Title	Abstract	Research Gap
1	US 7230206 B1	Battery operated heated jacket	A battery operated heated jacket, with removable body and sleeves and hood, the jacket with a removable liner, the liner further detachable from	<ul style="list-style-type: none"> <li>Safety features should be included in this proposed device.</li> </ul>

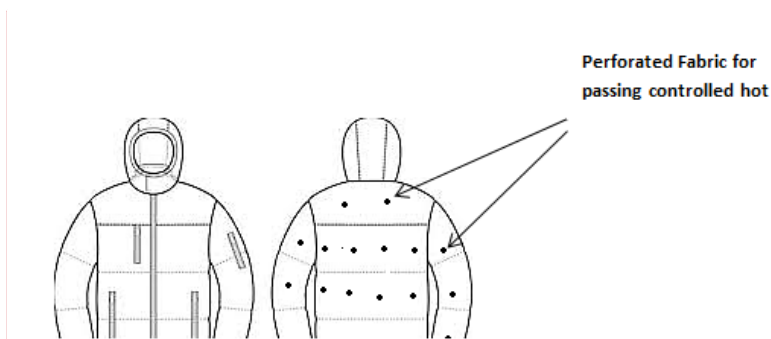
			itself at the attachment of the sleeves and the hood, the attachment comprised of quick connects, the jacket comprised of a pocket containing a control box, the box containing a microprocessor, power Source, heating controls, and media player, the hood comprised of earphones communicating with the media player, a detachable wire connecting the media player to the head phones.	<ul style="list-style-type: none"> <li>• Application is limited for general usage</li> <li>• Expensive design</li> </ul>
2	US005893991A	Battery operated heating system for a vest or a jacket	A new Battery Operated Heating System for a Vest or a Jacket for warming the user in cold weather or for therapeutic reasons. The inventive device includes a garment vest having a right side and a left side and longitudinal heating elements. In use, after the garment vest is made to include all of the elements comprising the present invention, the garment vest is worn and the batteries are installed and electrically connected to the right power outlet and return and the left power outlet and return. The garment vest is equipped with a plurality of separate control settings where the right side is controlled separate from the left side 14 and the right side can be set at one setting while the left side is at another setting.	<ul style="list-style-type: none"> <li>• Reliability of device is not discussed.</li> <li>• Safety features should also be the major concern.</li> <li>• Proposed model was not cost effective.</li> </ul>

#### C. DETAILED DESCRIPTION (Technical as well as non-Technical):

**Detail Description:** By converting electrical energy into heat form by using a heating element as a source of heat generation by using the blower (fan-operated). The heat used in the enclosed region is bypassed through temperature controller from the various orifices provided which are systematically designed inside the jacket which is made of fire proof materials like mineral wool, glass wool, coated nylons, etc. for uniform distribution of hot air to maintain the body temperature as a normal condition. It should also have an auto cut system using a control system

to maintain body temperature. The Proposed model with perforated texture in fabric from inside as shown in Figure 1.

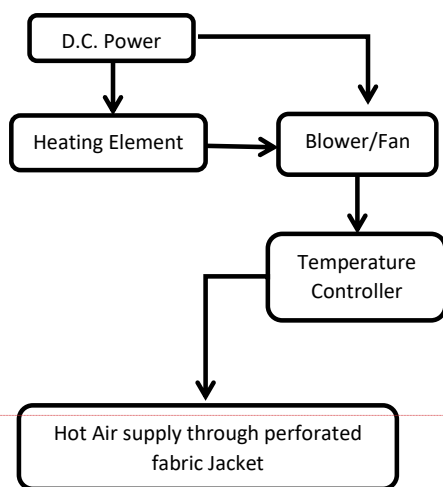
**Commented [DL1]:** Kindly elaborate the detail description of the invention by highlighting the novelty



**Commented [DL2]:** Elaborate the novelty

Figure 1 Electronic jacket with perforated textures

**Block Diagram:**



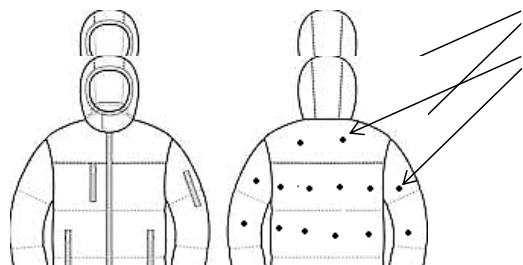
**Commented [DL3]:** Elaborate the block diagram in detail

|

**Figure 2 Block Diagram of E-Jacket concept**

**D. ADVANTAGES OF THE INVENTION:**

- i. Ease of control
- ii. Compact in size



**Perforated Fabric for**

**Perforated Fabric for**

- iii. Provide an adequate amount of heat as required.
- iv. Easy to fold and easy to carry
- v. No- Toxic gases involved
- vi. Clean operation
- vii. Protect against environment effect like cold, Pneumonia, lungs related disease

**APPLICATION:** At extremely cold weather regions to protect against various diseases like Pneumonia, lungs related disease, low breathing issue etc.

**4. KEYWORDS:** Electronic jacket, Fire-resistant fabric, temperature controlled, cost effective

**5. POTENTIAL CLAIMS:**

- i. Jacket attached with battery and controller for maintaining body temperature.
- ii. The gadget with appropriate security highlights against fire.

---

Signature of Inventor

Name of Inventor with UID and  
Department

Date