To,
The Principals,
Pharmacy Affiliated Colleges to RGUHS.

Dear Sir/Madam,

Sub: Allotment of theory examination center for UG/PG
Pharmacy theory examination December/January-2020

As per the above cited subject, RGUHS has implemented live web-streaming of theory examination hall. It is proposed to implement web-streaming in the ensuing exams as per the subject above. In this regard you are hereby informed to make the necessary arrangement as per the specifications attached along with this letter and submit the report to the University before **30/11/2019**
to Registrar (Evaluation). University officials will visit theory centers to verify the arrangements made by the college. **If the centers fail to comply with the University laid down specifications for implementation of web-streaming and peripheral scanning, theory center will not be allotted to such colleges.**

This is for your information and immediate needful action

Dr. K B Linge Gowda
Registrar (Evaluation)

Copy to:-
1. PA to Vice-Chancellor / Registrar, RGUHS/Registrar (Evaluation), RGUHS.
2. Office Copy.
### Criteria for Allotment of Theory Examination Centre of Rajiv Gandhi University of Health Science, Bangalore

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Item</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Previously was a designated theory centre</td>
<td>Yes or No</td>
</tr>
<tr>
<td>2</td>
<td>Designated examination hall with minimum of 100 seating capacity is existing or not</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>How many examination halls are existing</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Capacity of each examination hall</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Is the seating arrangements according to University regulations</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Whether the CCTV's are available in all designated examination rooms / hall as per the specifications</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Whether the CCTV recording is satisfactory in all the designated examination rooms / hall as per the specifications</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Whether the question paper downloading room is situated within the examination hall</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Whether the designated paper downloading room is having the following facilities a. Computer with Internet Connection &amp; alternate arrangements</td>
<td></td>
</tr>
</tbody>
</table>
b. CCTV Coverage  
    c. IP address of the Internet Connection  
    d. Photo copying machine with good condition  
    e. UPS / Generator facilities  
    f. Printer with good condition

<table>
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<tr>
<th></th>
<th>Scanning Room facilities with CCTV as per the specifications</th>
</tr>
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<tbody>
<tr>
<td>10</td>
<td>Total number of faculty having experience of conducting exams</td>
</tr>
<tr>
<td>11</td>
<td>Total number of eligible faculty for invigilation and superintendents duties in the college / institution</td>
</tr>
<tr>
<td>12</td>
<td>Total number of students taking examination</td>
</tr>
<tr>
<td>13</td>
<td>Previous examination related register year wise are maintained properly</td>
</tr>
<tr>
<td>14</td>
<td>Designated person details for the custody of answer booklets</td>
</tr>
</tbody>
</table>
| 15| a. Name  
    b. Address (Valid ID Proof)  
    c. Phone Mobile / Residential Number  
    **Reference person details**  
    a. Name  
    b. Address (Valid ID Proof)  
    c. Phone Mobile / Residential Number  

<table>
<thead>
<tr>
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<th>Alternate faculty details for conducting exams</th>
</tr>
</thead>
</table>
| 16| a. Name  
    b. Address (Valid ID Proof)  
    c. Phone Mobile / Residential Number  
    d. Designation (Preferably senior faculty) |

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<tr>
<th></th>
<th>Remarks</th>
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<tbody>
<tr>
<td>17</td>
<td></td>
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</table>

**Declaration by the Principal:** The information entered above and attached all the necessary documents duly signed by me are true to the best of my knowledge.

Principal Signature & Seal

Mobile No:  
Email ID:
Infrastructure to be provided by the college to be qualified to have examination center.

Examination Hall:

i. Each examination hall should be equipped with **Fixed and PTZ IP cameras** in order to provide complete coverage of the room. Indicative positioning of cameras is given below:

![Small Examination Room Diagram]

Each fixed IP camera can cover a distance of up to 50ft length and 18-20 feet width. For a small examination room, 2 fixed cameras and 1 PTZ camera may be used to provide complete coverage of the room.

Option 1: A small examination room can be setup with 2 fixed and 1 PTZ camera.
Option 2: A small examination room can be setup with 2 fixed IP cameras only.

![Big Examination Room Diagram]

For a big examination room, more fixed IP cameras can be mounted on the ceiling to cover the full length of the room. The two fixed cameras at the front of the room cover area of upto 50 feet, and the other two ceiling mount cameras cover the rest of the room.

**Note:** The above camera positioning is indicative only. While installing, care must be taken by college to ensure entire examination room is covered completely by the cameras. **Two additional cameras should be installed for every 50 feet.** One additional camera should be installed for **every 18 feet width.** For both width and length coverage it is advised to overlap at least **5 feet** before the end of coverage of one camera (for
Example for the length of 50 feet second set of cameras should be fixed at 40th feet of first set of cameras. The camera specifications are given at the end of this document.

ii. All the cameras need to be connected to one **PoE network switch** which will provide power and network connectivity to the cameras. The PoE switch should be connected to an uninterrupted power source (UPS) so that cameras and the network are always on and are do not go down due to power outages. The cameras should be up and running **24x7** from start date of the exam till last day of exam. Care must be taken to ensure all surveillance infrastructure (cameras, network switch and gateway) are continuously powered on during these days.

iii. The network switch should be provided with internet connectivity. **The required internet bandwidth speed depends on the number of total cameras being connected in the college. For each camera that is connected, minimum of 1.5Mbps of upload speed is required.** So, if a college has 6 cameras, 9Mbps of internet upload speed should be dedicated for this purpose.

iv. College must make **one IT person available** for any immediate trouble shooting or support on the days of examination.

v. **Question paper downloading** must happen in one of the examination rooms at a dedicated area. Care must be taken to ensure this area is clearly visible through the camera(s) placed in that examination room.

   a. Option 1 – Set up one PTZ camera (of same configuration mentioned above) in the room in order for university to have clear visibility of the downloading and printing process.

   b. Option 2 – Alternatively provide 2 bullet cameras instead of one PTZ camera in the room.

vi. For any reason if downloading is happening in a separate room, that room should be within the same building as examinations being conducted and the room should be setup with camera(s) as mentioned above, connected to the same switch and network as the examination room cameras.

vii. **College must provide a room for answer scripts scanning.** This room should be covered by camera(s) connected to the same switch and network.

   a. Option 1 – Set up one PTZ camera (of same configuration mentioned above) in the room in order for university to have clear visibility of the papers being scanned.

   b. Option 2 – Alternatively provide 2 bullet cameras instead of one PTZ camera in the room. This will provide overview of the room, but may not be possible to see the answer scripts clearly from university (as there will be no optical Zoom).
viii. Local recording and Streaming device: College should provide **one dedicated system running Ubuntu 18.04 operating system** – which will be used to provide the feed to university securely without the need for any static public IP.

a. Option 1: Recent generation core i3 processor with 4GB RAM or higher – supports upto 16 cameras.

b. Option 2: Recent generation core i5 processor with 8GB RAM or higher – supports upto 32 cameras.

ix. Camera Specifications:

a. Fixed Cameras: IP cameras (bullet or dome) with on if profile S compliant with IR, PoE, 1920x1080 or higher resolution. Should have audio capability with good quality mic input.

b. PTZ Cameras: Besides the points mentioned for fixed cameras, PTZ camera should have 10x or higher optical zoom, 360° Pan and 120° or higher Tilt.
RGUHS/R(E)/Pre-exam/2019

Date: 01/10/2019

To,

The Principals
Pharmacy Colleges affiliated to RGUHS.

Sir/Madam,

Sub: Criteria for Allotment of Theory Examination Centers during September-2019 Examination.

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You are hereby instructed to upgrade the infrastructure facilities like PTZ/CCTV Cameras as per University Norms for allotment of Theory Examination centers during September-2019 examination. It is mandatory for already existing centers and for allotment of new examination centers also.

You may call below mentioned technical support for assistance of establishing Web Streaming at your center between 10.00 am to 6.00 pm.

Raghavendra: 9618847937
Haril: 7780664470
Sydaraa: 9704500127
Pradeep: 9550080999
Meraj:9700782287

Thanking you,

Sd/-

Dr. K.B. Linge Gowda
Registrar(Eval)